

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

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The Chemical Potentialities of the South

What are they?

Where are they?

What raw materials are available?

What advantages can be offered?

What would their largest development mean in manufactures and in agriculture?

How can they be utilized with the greatest profit to the South and the Nation, in time of peace as well as in time of war?

What can the South offer the chemist?

What can the chemist offer the South?

These are some questions which we present for the careful study of our readers, and upon which we invite their suggestions. As stated elsewhere in this issue, we propose to publish a special edition in which leading experts will undertake to answer these questions.

BALTIMORE, AUGUST 3, 1916



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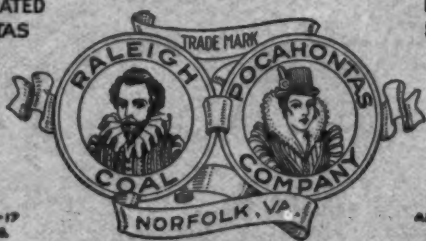
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MANUFACTURERS RECORD

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HATES OUR PREPAREDNESS VIEWS, BUT LOVES OUR CONTRACTORS' NEWS.

J. L. MCGEEHEE CONTRACTING CO.,

General Contractors,
Tuscaloosa, Ala.

Topton, N. C., July 28.

Editor Manufacturers Record:

We are bitterly opposed to your preparedness policy, and think it a shame, sin and disgrace that this glorious nation of ours should spend enormous amounts of money for such a vain and worthless, and even wicked, cause when if only 10 per cent. of the money so wrongfully spent was diverted by the Government to education, roads and relieving flood and famine devastated sections, what a glorious country this would be! And may God put His stamp of disapproval upon such a scheme to the extent that it will be impossible to accomplish this end is my earnest prayer.

But as an advertising medium for contractors you have the world beat. We have used to great advantage your columns for ten years, and find them growing more useful every day. I recently wrote you that I had secured ten months' work for steam shovel only through your paper, and the other day I wanted a second-hand jack hammer drill quick, and wired you, and within six days I had been offered about ten, and selected the cheapest and best one and had it shipped by express, and it is now here ready for work.

I heard from people all over the country, and in most cases they were business letters with just what I wanted to buy.

This letter is not a testimonial, but an expression of appreciation of access to such a good contractors' paper.

Wishing you complete failure in your preparedness program and all the success you can possibly have in conducting such a fine magazine, I am,

Yours truly,

JEFF L. MCGEEHEE.

Up to two years ago the MANUFACTURERS RECORD was just as much opposed to a big army and navy as is Mr. McGehee. We, too, felt that money should be spent for internal improvements, such as river and harbor and kindred work, instead of for battle-ships, and often said so; but the world has changed in two years, and he who fails to appreciate that fact has not rightly read the signs of the times.

Does Mr. McGehee believe in a city maintaining a police force or does he believe that the days of robbers and murderers have forever passed? If a city finds a police force necessary, why not a country, especially with international highwaymen in evidence doing viler murderous work than any individual murderer ever thought of doing?

WRONG INFORMATION.

KAISER WILHELM still seems to think that he is a co-worker with the Almighty. The Kaiser is evidently badly mistaken as to the identity of his partner.

The Chemist and His Relation to the "Chemical Potentialities of the South."

THIS is the age in which chemistry is supreme. It is an age in which we are beginning to get a faint conception of how little we yet know and how little we have yet achieved.

As we study what the chemist has been doing in metallurgical development, in the saving of waste products and turning them into profit; as we note how all the resources of nature are for the skill of the chemist becoming the raw material out of which he creates products whose value to mankind knows no limit, out of which he produces wealth beyond the dreams of olden days, out of which he fashions new worlds of infinite activity, we more and more realize that all that has been done is merely the forerunner of greater things to come.

As the chemist in his laboratory brings forth new and hitherto unsuspected sources of wealth and power, he, too, more and more realizes that he is but working in the infant stages of his science and its relation to all the material activities of mankind.

Back of all human progress in manufactures, in agriculture, stands the chemist. He is the mighty power which is opening up for the manufacturer, the capitalist, the agriculturist and the physician new worlds of marvelous and amazing results. But the chemist knows that his work has scarcely begun.

In all the broad world there is probably no field which offers wider opportunities for the profitable development of industries, for the utilization of raw materials in the creation of wealth, and for the development of industries essential to the prosperity of the country in time of peace, and to its safety in time of war, than the South.

Here is an empire which knows no limit for the chemist.

Here is a section which, of all others, should be the most active in enlisting the co-operation of the chemist, for the chemist is the pioneer who precedes the successful manufacturer and farmer, and here is an empire of opportunity where the chemist must be the leader.

As important as is the chemist to this field, the field is equally as important to the chemist, for here he finds a combination of resources that cannot be duplicated in any other section of this or any other land.

The South should become the chemical producing section of the nation, and here the chemist should find his largest opportunity of usefulness and activity in the utilization of truly marvelous resources.

With a view to presenting these facts to the world, the MANUFACTURERS RECORD proposes to issue in September a special edition devoted to "The Chemical Potentialities of the South."

It is proposed to publish that issue in advance of the Second National Exposition of Chemical Industries to be held in New York September 25-30, and in order to make known as widely as possible the facts which will be presented, a copy of that edition will be mailed to every one of the 8000 members of the American Chemical Society, and to many other

leading manufacturers and capitalists throughout the country.

In this work, which we believe will possibly be the most important single effort that we have ever made in behalf of the South, the MANUFACTURERS RECORD will have the active co-operation of some of the foremost chemists of the United States.

It is important that the South should be awakened to its own potentialities for chemical industries, and it is equally important that the chemists and manufacturers of other sections should understand the resources of the South for the development of industries into which chemistry enters as a vital factor; and this, indeed, includes every possible line of manufacturing, as well as of agriculture. Because of these facts the South should be well represented at the National Exposition of Chemical Industries in New York, in order that its raw materials and its finished products of interest to the chemists of the land should be so presented at that exposition as to invite the investigation of visiting chemists, manufacturers and investors.

It is also important that the chemists and manufacturers of the whole South should attend that exposition in order that their own activities may be quickened and that they may find new opportunities for creative work. One illustration alone emphasizes the importance of this. At the exposition last year there was an exhibit of the Cottrell system for saving potash as a by-product in cement manufacturing. The investigation of that exhibit by an official of a Maryland cement company resulted in the building of a by-product potash plant, the second one of its kind in the United States and the only one east of California. The action of that company has caused a large number of cement companies to investigate the system and to make plans looking to the establishment of similar plants. Out of that investigation came a study of the possibilities of using the same system for the saving of potash as a by-product in the making of pig-iron, and this subject, which has recently been discussed through the MANUFACTURERS RECORD, is now commanding the closest investigation of the foremost iron and steel men of the United States. This is but one illustration of hundreds where exhibitors and visitors met to the profit of both and to the profit of the country.

In carrying out the program for this special edition devoted to "The Chemical Potentialities of the South" the MANUFACTURERS RECORD invites suggestions and the co-operation of its readers throughout the country.

Letters of heartiest commendation of the suggestion of Dr. Charles H. Herty, president of the American Chemical Society, made in the MANUFACTURERS RECORD of last week in regard to "The South's Opportunity in the Exposition of Chemical Industries in New York," have been received, showing a widespread interest in the matter. The feeling voiced is indicated in a letter from Mr. W. N. Berkeley,

Ph.D., consulting analytical chemist, of Annapolis, Md., who writes:

It seems to me that it would be difficult to exaggerate the tremendous value of the results that would follow a quick and hearty response to the suggestions made in Dr. Herty's very notable article, "The South's Opportunity in the Exposition of Chemical Industries in New York," which appears in this week's issue of the MANUFACTURERS RECORD.

The importance of these suggestions is so great that I hope you have in mind the ways and means of giving the greatest possible publicity to Dr. Herty's article, such, for instance, as having it printed as a reprint and sent to every Senator and Representative in Congress from the Southern States at least, and to the Governors of all of the Southern States.

As Dr. Herty says, "The day is here when the call of the South to the chemist should be loud and insistent."

The South should call with loudness and insistence also the attention of the entire country to the wonderful opportunity that it presents for the establishment of a great variety of chemical industries. It seems hardly conceivable that our State officials should fail to see and seize the wonderful opportunity to which Dr. Herty calls their attention.

AN INVITATION TO WRITE TO THE PRESIDENT ABOUT THE NATIONAL GUARDSMEN.

COMMENTING on a letter from Mrs. Henry Smith of Indiana to the President, protesting against keeping her son and other National Guardsmen on the border, and the President's reply thereto, the Baltimore Sun, while upholding the President's action, says:

Nevertheless, we feel for Mrs. Smith and all the gentle tribe of anxious mothers. It is natural that they should be worried and that they should want to receive some reassurance from headquarters. We have not gotten used to the war habit in this country, and this is a new experience to a large part of our present American-born population. We have lived in a land of peace so long that even service such as that in Texas sets many hearts to fluttering. We hope the President's letter has made all the mothers in the country feel better. And we hope any of them will write to the President whenever she has a real trouble on her mind about that boy in Texas, because the President desires to know what the mothers as well as the fathers are thinking, and because such letters as Mrs. Smith's may aid him to do his duty more intelligently. Nobody ought to scold Mrs. Smith; she has done a public service not only as to the National Guard, but to the cause of democracy. Her unaffected and direct appeal to the President is another evidence of the close relations which exist between all classes of American society, and of a sort of family kinship on all fundamental questions.

The Sun endangers the ability of the postoffice to take care of mail to the President when it advises all the mothers of the country who have any trouble on their mind about their boys in Texas to write to the President and express their opinion on the subject, "because the President desires to know what the mothers, as well as the fathers, are thinking; and because such letters as Mrs. Smith's may aid him to do his duty more intelligently."

Was this a diabolical scheme of the Sun to flood the President with more letters than he can ever read or was the advice given with a view to let him know the real sentiment of these mothers and fathers and in helping him to reach right conclusions as to the handling of these troops?

The majority of men and women are very loath to write to the President. Somehow they feel that he is so far removed from them that it is something of presumption on their part to express their opinion to him through the mail. But here is a broad invitation from an enthusiastic newspaper upholder of the President to all fathers and mothers in the country who are not satisfied with the situation on the border as to their sons to write to the President and tell him about it; and that, too, on the ground that in writing such letters they will be conferring a favor upon the President by letting him know what the people are thinking on the subject. The suggestion should be taken seriously by the mothers and fathers and the business associates of all the National Guardsmen on the Mexican border or still in their State encampments, for, as the Sun suggests, such letters would enable the President to know what the people are thinking.

Commenting on this National Guardsmen situation, the Daily Journal of Pensacola, Fla., says:

Congress has at last been brought face to face with conditions, and that is the reason why Congress is ham-

pering home the idea of a greater army in addition to a greater navy.

After four weeks of mobilizing (June 19 to July 17), only 54,000 of 131,000 national guardsmen had actually reached the border. Of these 30 per cent., and in some cases 50 per cent., were found to be physically unfit for service, while approximately one-third of the national guard now at the border are raw recruits without any military training whatever.

After reciting these facts the Merchants' Association of New York recently endorsed the plan to increase the regular army from 275,000 to 300,000 men, to establish military training and to create a second line reserve of 500,000 to 1,000,000 men.

It will be recalled that General Wood advocates an army—given an efficient fleet—of 225,000 to 250,000.

The action of the Merchants' Association is typical of the action taken by hundreds of organizations throughout the United States, and that is the reason why Congress sees the light.

For reasons which it is not necessary to discuss now, the militia has proved inefficient in a national crisis. Either the men lacked food or they lacked horses, or they lacked officers, or they lacked trains, or they lacked guns, or they lacked discipline. And the million men the pacifists thought would spring, full armed (like Minerva), to their country's aid—where, oh, where are they now?

After a month's enlisting effort there are only sixteen men who have qualified for Pensacola's military company. This is a percentage of half a man to the thousand eligible. Whether this record is better or worse than in other places is not particularly important; the outstanding fact proved by recent events is that, so far as service is concerned, it doesn't particularly matter whether there's any militia or not. The truth of the matter is that we mustn't trust to the militia. The American people have found it out—Congress is finding it out.

"THE UNITED ENGLISH NATIONS."

MR. DARWIN P. KINGSLEY, president of the New York Life Insurance Company and a graduate of the University of Vermont, delivered, at the commencement in June, an address under the above title, which has been printed in pamphlet form. It should be read by every American citizen; indeed, the wider the circulation of this address throughout all the Anglo-Saxon countries of the world, the better it will be for the future of the world.

Suggesting that, at the close of the war, there should be some sort of federation of the Anglo-Saxon nations, Mr. Kingsley said:

Every reason advanced in 1788 by Washington, Hamilton and Madison for the creation of this union pleads trumped today for the creation of this larger union, for the creation of the United English nations. If such a proposal were now placed squarely before the English nations, it is lamentably probable that the one most responsive would not be ours; it may be necessary that we be scared and blustered by the flames of war before we rise to a due appreciation of what our fathers did for us, a full understanding of our high duty to humanity.

Referring to the three thousand miles of unfortified frontier along our border line between this country and Canada, Mr. Kingsley answers his own question as to why it is unfortified by saying that both sides believe that any serious difficulty there would be unpardonable—not to say criminal—that the relations between the two nations are such that fortifications would misrepresent the attitude and wishes of both peoples and both governments.

Admirable, however, as that arrangement is, it solves no problems; and no thoughtful man can deny that there are problems. Two years ago we might have needed evidence of the savage extremes to which nations will go when the doctrine of sovereignty asserts itself and the instinct of self-preservation is aroused. Today we need no such evidence.

"To fortify that frontier," says Mr. Kingsley, "would be to revert to barbarism; to leave it unfortified, assumes a condition which, at best, exists perilously. We are like children, playing at peace and 'making believe' that the Anglo-Saxon Republic already exists. We have, on neither side as yet, had the courage to face the truth."

In closing this exceedingly interesting address, which should awaken serious study of the people of this country, Mr. Kingsley said:

All along that far-flung frontier the identical peril that drove the thirteen States into Federation exists but now sleeps. It is folly to say that it will never awake. If the existing division in the Anglo-Saxon world persists, it is certain to awake some day. It may awake tomorrow.

The close of this war will bring to the Anglo-Saxon

nations problems almost identical with those that faced the colonies after the Peace of Paris. Have Wilson and Hughes and their associates here, have Bryce and Grey and Asquith and Lloyd George and their associates in Great Britain the vision and the courage of Washington and Madison, of Jay and of Hamilton? If they have federation will come, the riddle of this sphinx will be answered; if they have not the Anglo-Saxon tradition, which is now glorious, may gradually lose its inspiration and its meaning.

The Anglo-Saxon Republic: The United English Nations Who shall estimate its significance.

Its territory, apart from the dominions of its member nations, would be as immaterial as the realm which Jesus described when he said: "My kingdom is not of this earth." Physically it would be greater than Rome ever was. Morally it would be master of war and of the destinies of the human race.

WHY NOT BE CONSISTENT?

TAKING the ground that a Child Labor bill will be passed by Congress, and indirectly expressing its commendation of it, the Wall Street Journal asks, Why not be consistent? and closes its editorial with the following:

There is no international side to the question. Why not go a step farther, that no competitive goods shall be brought into this country produced under labor conditions less progressive than our own? Why should the United States be a free market for goods produced by nations who cut under the standards we set ourselves and, thereby, create for themselves a lower cost of production? As usual, Congress fails to foresee the secondary consequences of its acts.

If Japan produces cotton goods by child labor and these goods enter our markets in competition with goods produced under a higher cost of production caused by our self-imposed higher standards, why not exclude such goods or make them pay an import tax equal to the differences in costs of production? Why not be consistent in the matter at this juncture and attach such an amendment to the child-labor bill?

The Wall Street Journal should not expect so much intelligence from Congress or from those who are pushing this bill through as would be required to foresee such a condition as it suggests. We venture the assertion that not a single advocate of this bill has ever taken into consideration the question of forbidding the importation of goods made by child labor in Japan and China and elsewhere; and most of them, even if the idea had occurred to them, would scarcely be willing to make a fight to prohibit such importations. It would not be enough of a play to the galleries.

The MANUFACTURERS RECORD believes in seeking to raise the standard of living and of education in this country to the highest point possible. It believes in protecting the American market against importations from countries having a lower standard of wages and of living. It believes in trying to lift up the rest of the world instead of pulling the people of this country down to the level of other countries.

SHORT ON TRUTH.

THE MANUFACTURERS RECORD, published in Baltimore in the interest of Southern industry, would turn the Sunny South into an armed industrial camp. It would remove every plant for the manufacture of munitions and army and navy supplies south of Mason and Dixon's line, not forgetting that \$20,000,000 nitrate plant. First it demands that the Government establish an \$11,000,000 armor-plate factory at Birmingham, Ala., or thereabouts.—Chicago Manufacturers News.

The News must be edited by someone who loves the truth so much that he is very economical in its use.

The MANUFACTURERS RECORD has no desire to remove a single industrial plant for army or navy or peace supplies from any other section to the South. It does not advocate such a policy, and intelligent men know that fact. It does advocate the building of new plants in the South and Southwest.

The MANUFACTURERS RECORD does not demand that the Government armor plant shall be located in or near Birmingham. It has no favorites in the matter. It advocates that it shall be located away from existing plants, and leaves to experts to say whether the best point is in the South or out in Colorado. But why waste time on slanderers?

OUR RECORD IMPORTS AND THEIR SIGNIFICANCE TO AMERICAN MANUFACTURERS.

NOTWITHSTANDING the war, which has completely prevented imports from Germany and Austria, and the fact that nearly all European countries are so busily engaged in the production of munitions of war that we might suppose that they would have but little stuff for exportation, the total importations of foreign merchandise into the United States for the fiscal year ending June 30, 1916, was \$2,197,984,842, the largest importations on record, showing an increase over the preceding year of \$523,815,102.

The most important fact connected with this heavy increase of importations, and of largest significance to the country, is that of the total increase in importations \$459,238,443 was the gain in non-dutiable merchandise as compared with an increase of \$64,576,659 in dutiable merchandise. We are thus increasing our importations of dutiable goods at a very slow rate, while we are making an enormous expansion of our importations free of duty. The increase in non-dutiable merchandise for the year was nearly 45 per cent., a remarkable gain, fraught with serious significance to the industrial interests of the country.

If with nearly all Europe at war, with Central Europe completely cut off and unable to export goods to this country, and with the exorbitant freight rates which have prevailed during the last twelve months or more, our importations can reach the highest figure in our history, and our importations of non-dutiable goods show an increase over the preceding year of more than \$459,000,000, what may we not expect when the war is over and Europe turns its munition factories back into peace activities and undertakes to flood our market with the product of its amazingly efficiently developed industries operated at low rates of wages and compelled to seek a market regardless of profit!

Prior to 1909 our foreign importations had never reached the billion and a half figure. In that year they slightly exceeded that amount, but the highest total ever reached prior to 1916 was \$1,893,925,657. We have not exceeded that record by more than \$300,000,000, and that, too, in the face of war conditions and war freight rates. The total importations of dutiable and non-dutiable merchandise and the percentage free of duty by years since 1905 have been as follows:

Year.	Total value imports of merchandise. Free.	Total value imports of merchandise. Dutiable.	Total.	Per cent. of free.
1905.....	\$517,442,302	\$600,070,769	\$1,117,513,071	46.39
1906.....	549,623,878	676,938,568	1,226,562,446	44.81
1907.....	644,029,761	790,391,664	1,434,421,425	44.99
1908.....	525,693,308	668,738,484	1,194,431,792	44.01
1909.....	599,596,639	712,363,585	1,311,960,224	45.70
1910.....	755,311,396	801,636,034	1,556,947,430	48.51
1911.....	776,972,509	750,253,596	1,527,226,105	50.87
1912.....	881,670,830	771,594,104	1,653,264,934	53.33
1913.....	987,524,162	825,484,072	1,813,008,234	54.47
1914.....	1,127,502,699	766,422,958	1,893,925,657	59.54
1915.....	1,033,526,675	640,643,065	1,674,169,740	61.73
1916.....	1,492,765,118	705,219,724	2,197,984,842	67.9

As the imports of this year reached the highest figure in our history, so the percentage of importations free of duty reached the highest point recorded in this period. Of our total imports during 1916 practically 68 per cent. were free of duty, and 61.73 per cent. were free in the preceding year under the low tariff now in force, whereas during the earlier years of 1905 and 1906 dutiable merchandise averaged much less than half of our total imports.

We are already beginning, even while the war is raging and ocean shipping rates are unprecedentedly high, to get a faint suggestion of the magnitude of the imports which will flood our country when Europe's war factories are turned into peace factories, and when Europe's soldiers, quickened to unprecedented efficiency and eager to earn a living in peace work rather than to be engaged in war, will operate these factories at a degree of efficiency which was nowhere in Europe deemed possible prior to the war. The danger to this country can easily be foreseen. We cannot prevent the flood of goods that will sweep over the land to our own injury unless we

erect a barrier of an adequate protective tariff. The proposed anti-dumping bill, with its vicious and false basis, cannot possibly, unless radically changed before it passes Congress, be effective.

Unfortunately importations are showing an accelerated rate of growth. The total for June was \$245,896,770, a gain of over \$80,000,000 over June, 1915, and about the same amount for June, 1914. The June importations were at the rate of nearly \$3,000,000,000 a year, and of that amount non-dutiable merchandise exceeded the dutiable by \$62,000,000, or at the rate of about \$750,000,000 a year.

OUR HEAVY EXPORT TRADE AND ITS UNSUBSTANTIAL FOUNDATION.

OUR exports of merchandise for the twelve months ending June 30, 1916, were \$4,333,698,604 as compared with \$2,768,589,340 for the preceding year. Unfortunately for the permanency of our foreign trade, a very large proportion of this enormous increase in exports is due to the shipment of munitions of war. This furnishes a basis for temporary prosperity in the export business and in all the varied industries connected directly and indirectly with the production of war supplies. This, however, is an unstable foundation on which to build foreign trade. It cannot last any longer than the war lasts, and no one, not even those who are sharing in this prosperity, are so heartless as to desire a continuation of prosperity based on a continuation of war. Anyone who would not rather forego the prosperity which his business is now enjoying by reason of the war than to have it continue by reason of a continuation of the war would be so steeped in wickedness and depravity that he would be unwilling to associate with himself, much less with other men.

We can only look upon the temporary prosperity based directly or indirectly upon Europe's enormous demand upon us for war supplies as a condition which requires of us the earnest hope that it will soon end. Better poverty than prosperity if prosperity can come only through war. But we have a right to look for permanent prosperity based on the development of our domestic and foreign peace trade when the war is over, provided our legislator is wisely guided.

Not for a moment would the MANUFACTURERS RECORD suggest that this country is doing wrong in supplying these munitions of war. Legal and moral rights are maintained when to the utmost of our ability we are shipping war supplies to the countries of Europe which are seeking to defend the world's civilization against the most powerful and aggressive combination of forces of evil ever brought together; and it is well that so long as the war lasts our factories should be crowded to the limit to aid in maintaining civilization. But even those who are producing these munitions are hoping for the time when the end of war in Europe will end that portion of their business. They would be less than human if they did not take that view.

We are seeking to open up in South America and in other countries an export business, anticipating that we shall be able to supplant Europe in supplying these neutral countries with the stuff which they have formerly bought from Europe. The hope is visionary if it is based on any thought that Europe will not be able when the war is over to give us in these neutral countries a far more vigorous competition for their trade than we had before the war. Europe will then be in a position to produce at the lowest possible cost of labor, with the highest possible degree of efficiency, and with women trained to do work which it had never been supposed that they would or could do. Every effort of European governments will be concentrated upon aiding their people in regaining and enlarging their foreign trade. Competition against us will be far more vigorous than it was before the war. We are making some progress toward laying the foundation for a permanent export trade in manufactured products with the neutral countries of the world, but our progress is not yet sufficiently great to justify any expectation of as rapid development as many public men are expecting.

ALARMING DECLINE IN RAILROAD CONSTRUCTION.

STATISTICS of the Interstate Commerce Commission, recently published for its year ended June 30, show that during the last twelvemonth there were built in the United States by the steam railroads only 716 miles of new line, the lowest annual record for more than fifty years. In 1864, during the Civil War, only 738 miles were constructed, but even this was more than the record of the year from July 1, 1915, to June 30, 1916.

Going back from 1864, it is found that the years in which less than 1000 miles of line were built were 1862 and 1861, with 834 and 660 miles, respectively. Earlier than that there were no records below 1350 miles per annum until 1848, another war year, when only 398 miles were built. Before then the railroad was in its infantile stages of development, yet in 1841 there were constructed 717 miles of line, or a mile more than during the last year. It looks as if the construction of railroads was gradually vanishing after the fashion of a dissolving view from a stereopticon and that soon railroad history would repeat itself with yearly construction of only 100 or 200 miles of new line, as in the thirties and forties of the last century, unless conditions change.

The year of greatest railroad construction—that is, the calendar year, which is meant by references to all annual construction excepting that of the Interstate Commerce Commission terminated a month ago—was 1887, when nearly 13,000 miles of new line were built in the United States. In 1882 the 10,000 mark was exceeded with a total of over 11,500 miles of new line added to the systems of the country. In 1888 very nearly 7000 miles were constructed, but after that the 6000 mark was not exceeded until 1902, when it was slightly topped. Since then there were fluctuations until 1910, but after that year the total of annual railroad building was stationary for three successive years, when it suddenly fell off from about 3000 miles to a little more than 1500 in 1914, and in 1915 it had dropped to but little more than 900 miles. Now that the last statistics show a drop to but a fraction more than 700 miles yearly building, the situation is alarming.

The following table reveals the railroad building situation for the last 25 years:

1891 4071 miles.	1899 4569 miles.	1907 5212 miles.
1892 4419 "	1900 4894 "	1908 3214 "
1893 3924 "	1901 5368 "	1909 2748 "
1894 1790 "	1902 6025 "	1910 4122 "
1895 1428 "	1903 5652 "	1911 3096 "
1896 1682 "	1904 3832 "	1912 2987 "
1897 2109 "	1905 4388 "	1913 3071 "
1898 3265 "	1906 5623 "	1914 1532 "
		1915 933 "

Averaged, this shows that there ought to be 3600 miles of new railroad built in this country each year, yet the figures for the year ended June 30, 1916, show a total of less than 20 per cent. of that average aggregate, and this notwithstanding the fact that railroad traffic is increasing with wonderful rapidity, as disclosed by the statements of earnings of the big railroads and that there was never before such great demands for the products of agriculture and industry.

New regions await development because of lack of railroad facilities.

Hostility toward railroads must cease, that capital will again be induced to lend its strong arm to their extension.

GRAPHITE MILLS IN ALABAMA.

THE announcement made in the MANUFACTURERS RECORD recently that a hundred-ton graphite mill would be established at Ashland, Ala., was followed last week by a report that a Kentucky company will build a four-hundred-ton graphite plant there.

These statements are but indicative of the awakening interest throughout the South, and throughout the country in the South, as to the rich resources of this section awaiting development under the stimulating conditions brought about by the war, which is acting as a protective tariff to keep out foreign importations of these materials and to encourage development enterprises at home. The room in the South for development work along these lines is without limit.

WHEN AND HOW WILL THE WAR END?

SHORTLY after the war began the MANUFACTURERS RECORD editorially predicted that it would last at least three to four years, and gave the reasons therefor. We have never seen any justification for changing that view.

Without pretending to any gift of prophecy, the MANUFACTURERS RECORD would offer the following speculative suggestions:

The European war will last two years longer.

Germany and Austria will not only have to pay, as far as money can repay, all that the war has cost Belgium and France, but Germany will lose Alsace and Lorraine and possibly some additional territory. Moreover, they will have to pay an indemnity of not less than ten billion dollars.

Constantinople will fall to Russia, and Turkey will be dismembered and the Turkish power driven out of Europe.

The Hohenzollern and Hapsburg dynasties will be blotted out, and the men of these families who at the close of the war are living will probably be imprisoned for life and perhaps some of them may be executed.

Many of the officials responsible for murder in the killing of the English nurse and others will have to pay the penalty with their lives. It will then be too late to appeal for mercy. They showed no mercy, and we doubt if any mercy will be shown to them. The leaders who took the sword in the campaign to conquer Europe will themselves perish by the sword.

In the end Germany will become a republic and the good people of that country will rebuild its prosperity and its humanity and seek to atone for the horrors which have been brought upon the world by Kaiserism and Prussian militarism, and then friendship of European people will take the place of present hatred.

These are suggested merely as speculative predictions. Two years hence we may be able to see how nearly we forecasted the future.

THE NATIONAL GUARD AND THE WAY IT WAS TRICKED.

A DISPATCH from El Paso, Tex., to the New York Sun, quotes General T. H. Bliss, Assistant Chief of Staff, as saying:

I am going to recommend to the Secretary of War that all guardsmen on the border who are discontented with camp life be sent back home as soon as military exigency permits.

The same dispatch to the Sun reports that applications for release from service as guardsmen are pouring into army headquarters at San Antonio at the rate of 1500 a week.

If General Bliss carries out the statement quoted, it would be just as well for him to recommend that all of the National Guard be sent back home without delay, for if all who are discontented with the conditions under which they were tricked into the present situation should apply for release, there would be little, if anything, left to represent the National Guard on the Mexican border.

When the inexcusable blunder was made of dishonorably tricking the members of the State Militia into signing a six-year oath into the Federal service, the seed was sown for just discontent which must, by the very nature of mankind, continue to grow. It is impossible for the men who, through this dishonorable trick of moral compulsion, when they were compelled to sign this six-year oath or else appear as cowards, without the opportunity of studying the matter or consulting their families or their business associates, not to feel that the entire plan of calling them out and swearing them into this six-year service secured their oath under what, in the business world, would be counted as false pretense and so dishonorable that the business institution which committed it would justly deserve bankruptcy or its officers severe punishment.

It is not necessary to mince words because it is a Government act, since this very act has sown broadcast through the nation the seed of discontent, in

these men and in all the people connected with them, as to the honesty of the Government and those responsible for this work. But, more than that, it has created throughout the country a fear of identification with the army, and it has been the hardest blow that has been given, in this generation at least, to the spirit of patriotism among the people of the land. Men may be willing to risk their lives as a sacrifice for the safety of the nation, provided they know that they are honestly and honorably treated; but when they find that they are neither honestly nor honorably treated, patriotism is, for the time being at least, lessened, if not destroyed.

The MANUFACTURERS RECORD took this position from the very moment the act of swearing in these men to a six-year Government service was committed. It knew enough of human nature to know that there could be no other result than that of a growing spirit of dissatisfaction and of lessening interest in the protection of the nation under the conditions existing.

It is not possible for any student of human life, who has an average degree of intelligence, not to recognize that the man who feels that he has been tricked or swindled grows more and more discontented—and justly so—as he is made to suffer the effect of this trick. It would be so in private life, and it is unquestionably true of the feeling which a large number of the members of the National Guard and their families and others will have in regard to the way in which they were called out and sworn into this six years' service and then rushed to the border, where it was reported that they were in danger of immediate conflict with seasoned and trained soldiers of Mexico, though they were untrained, unequipped and wholly unprepared for any such emergency. Had these men been compelled, in this state of unpreparedness and physical unfitness by reason of lack of hardening and training, to meet the Mexican soldiers, who for years have been fighting and who are able to endure every hardship of army life, the result would have been cold-blooded murder on the part of the American people, and every man responsible, directly or indirectly, for this condition would have had to share the burden of the blood of these men.

It is the knowledge of all of these facts and many others of equal import which is growing in the hearts of the National Guardsmen. They may be held in Texas by the power of the same moral compulsion which made them swear to the six years' service; they may become faithful soldiers to the best of their ability, but in their hearts is this bitter realization that they have been unfairly, even dishonestly, treated, and from these men will go forth, of necessity, a fear and distrust of the whole military situation which can only be overcome by intelligent action which right now will recognize the mistake that was made and do the utmost to correct it. Shilly-shallying methods or attempts to cover up the matter or denounce the men who would escape from the results of this trick, or to tell of the honor of serving the country in this way, will only react and intensify conditions.

A blunder has been made, if, indeed, a crime has not been committed. Its complete correction to the limit is the only salvation of the situation.

"TWELVE THINGS TO REMEMBER."

MEN who have achieved greatly in this world have kept steadily before them fixed principles by which they were guided. When published these principles have always been found impressive and of universal usefulness and application. Take, for example, Marshall Field's "Twelve Things to Remember," viz:

The Value of Time.
The Success of Perseverance.
The Pleasure of Working.
The Dignity of Simplicity.
The Worth of Character.
The Power of Kindness.
The Influence of Example.
The Obligation of Duty.
The Wisdom of Economy.
The Virtue of Patience.
The Improvement of Talent.
The Joy of Originating.

WANT TO GET OUT OF NATIONAL GUARD

THE Outlook for August 7 prints a letter from a National Guardsman now in Texas, the son of a prominent New York business man, in the course of which the following statements appear:

They are working us very hard to get us in shape. Thank God, we didn't go straight into Mexico, for half of us would have been dead by this time.

I read in the newspapers of the wonderful things we have to eat. I wish some of those reporters were living here for a week. They don't give us half enough. This noon, after working all morning in the sun, having had at 6 o'clock a piece of bacon and bread, they gave us one piece of bread with maple syrup on it and a cup of lemonade.

They have things at the depot for us to eat, but because certain blanks were not filled out things cannot be issued until those are received from New York by mail.

The other day, when we got our meat, it wasn't fit to eat, and had to be thrown away. This is a fine training for all in charge, but they ought to brace up, for, if we go into Mexico, we won't have time, as we have here, to straighten things out, and unless they do, believe me, I would rather stay on this side of the border.

I haven't the slightest idea when we will return, but when we do there won't be any Seventh, Twelfth and Seventy-first left. Everyone is going to get out as soon as possible. I hear it on all sides.

In commenting on this letter the Outlook says:

We print this letter in full, not because it portrays any special hardships—for the soldier's life is necessarily one of hardships—but because the young man who wrote it, both by training and experience, knows what efficiency is, and his letter is an illuminating comment upon the efficiency of trying to federalize the National Guard under the present inefficient law. We do not think that either the enlisted men, the officers of the militia or the officers of the regular army are to blame for the present situation. Congress and the President are the men who are responsible. Military experts have been telling the country for a long time that to try to create a national army out of forty-eight separate State units is folly.

The closing paragraph of the letter which we have quoted is confirmatory of the statement which the MANUFACTURERS RECORD has made, that the way in which the National Guard has been handled from the day it was called out has tended to lessen patriotism and to reduce enlistment to the minimum, and it will be certain to cause an eager desire on the part of members to get out of these organizations and cause others to keep out. That is the sad effect of a disastrously badly handled job. We are simply stating unfortunate facts.

SOY-BEAN INDUSTRY FOR LOUISIANA.

Cottonseed-Oil Mills Will Equip for New Crop. Strong for a Protective Tariff.

A significant report comes from Louisiana regarding the introduction of the soy-bean industry into that State. Following the establishment of the industry on a commercial scale in North Carolina, as recently described in the MANUFACTURERS RECORD, farmers and cottonseed-oil men in a number of Southern States have turned their attention to the new industry, and indications are that it will be given a great impetus in many places right away.

Newspaper reports are to the effect that the more than thirty cottonseed-oil mill owners in Louisiana have been so much impressed with the possibilities of profitably handling soy beans as a supplemental line that they will equip their mills for soy-bean crushing in time for the next crop.

Of more than incidental interest in this connection is the recognition given to the principle of a protective tariff. In the course of its article on the new move of the cottonseed crushers the Times-Picayune of New Orleans says:

"Outside of the general agreement to buy and crush the seed, and to encourage the growers, the mill men may also lay the lines for uniting the Western and Southern States in an attempt to secure some protection for the product they are about to take up. Both the beans and the oil are being imported from Manchuria in large quantities. At Seattle alone the imports, that only amounted to thousands a few years ago, now amount up to millions. With protection the farmers will be able to make the bean a permanent staple, with both this country and Europe as markets to guarantee against any drop in prices."

Savings Deposits in Florida Banks Steadily Increasing

From 170 banks and trust companies in Florida, out of a total of 270, the MANUFACTURERS RECORD has received, within the last few days, statements as to the aggregate amount of strictly savings deposits in these institutions. This investigation was undertaken with a view to finding out whether the State and National banks and trust companies are doing in that State what the mutual savings banks are doing in Eastern States in developing the spirit of thrift, as expressed in savings deposits. That much progress is being made is clearly shown by these figures. It is possible that the 100 banks in the State from whom replies have not yet been received will not average, in savings deposits, as much as those who promptly replied to the inquiry, but it is quite safe, we think, to estimate that the total savings deposits of the State will amount to as much as \$30,000,000, as the 170 banks from whom reports have been received have an aggregate of \$23,325,484.

In a recent editorial on savings deposits in the South as compared with other States attention was invited to the fact that the figures related specifically to the deposits in mutual and stock savings banks, as differentiated from savings deposits in other banks. In the Eastern States, from Maryland to New England, the mutual savings banks have had a remarkable growth. These banks, as a general thing, have been managed by the ablest financial men in their communities. They have not been established with a view to making money for stockholders, for they have no stockholders, but they were organized in the early days for the purpose of encouraging the spirit of thrift in their communities. The results are seen in deposits in the strictly savings banks in Massachusetts, for instance, of \$917,000,000. This does not include many savings deposits in other banks, but merely those that are in these mutual and stock savings banks. It is well to bear these facts in mind, because while the South is beginning, through State and National banks, to encourage savings deposits, its progress in this direction has been along the line of depositing savings in these banks rather than in the establishment of mutual savings banks.

The inquiry addressed to the bankers of Florida asked them to give us the amount of "their strictly savings deposits," and also asked as to whether there is any tendency toward an increase in savings deposits. The statements from these various banks indicate that the spirit of thrift, as expressed in savings deposits, is growing in every part of the State. Out of the 170 banks included in the list below, there are only two or three that report that there is no increase in the tendency toward larger deposits and two or three which indicate that the progress is slow. The others all answer "Yes" to the question, "Is there a tendency toward an increase in savings deposits?"

A number of banks have failed to reply to the inquiry. It is too late now to include them in the list. In this failure to reply they have followed an unfortunate custom, which, at least, should not exist in banks, of not replying to business letters even when return postal cards or stamped envelopes are sent. The banks which have replied have done their communities a good service. Some of them have taken the trouble to make interesting comments. For instance, Mr. S. A. Wood, cashier of the Volusia County Bank, De Land, Fla., writes: "Our deposits at this time are a little over a million, half of which are savings accounts. We think the people of De Land are as fortunate as the general run of people, and the best citizens on earth are to be found here. Tell your readers about us. It may put new life into others less prosperous." The MANUFACTURERS RECORD can bear witness to the air of prosperity which pervades De Land, as it pervades many other towns in Florida.

The banks from which reports have been received are as follows:

Name of Bank.	Address.	Total amount of strictly savings deposits.	Is there a tendency toward an increase?
American Exchange Bank.....	Apalachicola ..	\$53,000.00	No.
Apalachicola State Bank.....	Apalachicola ..	49,800.00	Deposits are ahead of last year.
State Bank.....	Apopka ..	33,000.00	Yes.
State Bank of Auburndale.....	Auburndale ..	9,827.12	Yes.
First National Bank.....	Avon Park.....	3,000.00	Yes. Have only opened savings department recently.
State Bank of Bartow.....	Bartow.....	24,409.94	Yes.
Bank of Boynton.....	Boynton ..	1,257.75	Yes.
State Bank of Bocagrande.....	Bocagrande ..	1,000.00	No. Value of cash too high here to foster much savings.
First Natl. Bank of Bradentown.....	Bradentown ..	129,660.00	Yes.
Bradentown Bank & Trust Co.....	Bradentown ..	50,000.00	Yes. We also have, in addition to savings account, certificates of deposit drawing interest to the amount of about \$13,000.
Bristol State Bank.....	Bristol ..	12,066.48	Yes.
Branford State Bank.....	Branford ..	36,800.00	Yes. Savings increase each year.
First National Bank.....	Brooksville ..	68,795.00	Yes. Our savings deposits are steadily on the increase, regardless of conditions.
State Bank of Bowling Green.....	Bowling Green.....	14,000.00	Yes.
Citizens' Bank of Bushnell.....	Bushnell ..	5,600.00	Yes.
Callahan State Bank.....	Callahan ..	54,642.36	Yes.
The Cedar Key State Bank.....	Cedar Key.....	9,909.51	Yes.
Chipley State Bank.....	Chipley ..	2,536.57	Yes.
People's Bank.....	Clearwater ..	28,139.25	Yes.
Bank of Clearwater.....	Clearwater ..	96,000.00	Yes.
Bank of Crescent City.....	Crescent City..	35,000.00	Yes.
Bank of Crystal River.....	Crystal River..	14,000.00	Slight.
Bank of Cocoa.....	Cocoa ..	34,587.61	Yes. This class of deposits not very popular here with banks. Too much cheap money.

Name of Bank.	Address.	Total amount of strictly savings deposits.	Is there a tendency toward an increase?
Bank of Dade City.....	Dade City.....	760.11	We have been open for business two weeks only; therefore the reason for the small amount of savings we have to report.
The Bank of Pasco County.....	Dade City.....	80,000.00	
Bank of Dania.....	Dania ..	26,000.00	Yes.
First National Bank.....	Daytona ..	91,000.00	Yes.
Merchants' Bank.....	Daytona ..	492,932.30	Yes.
East Coast State Bank.....	Daytona Beach.....	26,000.00	Yes. Total deposits \$301,000.
First National Bank.....	De Land.....	118,373.14	Yes. Our bank is young—only six years of age.
Volusia County Bank.....	De Land.....	450,000.00	Yes.
Bank of Delray.....	Delray ..	9,286.78	
Bank of Dunedin.....	Dunedin ..	11,181.23	Yes.
Bank of Dunnellon.....	Dunnellon ..	86,560.35	
State Bank of Eau Gallie.....	Eau Gallie ..	162.00	No. Ours is not a savings department; merely certificates of deposit upon which we pay interest, the same as savings banks.
Citizens' Bank of Eustis.....	Eustis ..	34,780.33	
The First National Bank of Fernandina.....	Fernandina ..	407,807.59	Yes.
The First National Bank.....	Fort Meade.....	30,227.25	Slight.
The Bank of Fort Meade.....	Fort Meade.....	44,000.00	Yes, but small, however.
The Fort Lauderdale State Bank.....	Ft. Lauderdale ..	25,000.00	Yes. We have just recently added a savings department to this bank.
The Bank of Fort Myers.....	Fort Myers....	130,000.00	Yes.
St. Lucie County Bank.....	Fort Pierce....	46,340.00	
Bank of Fort Pierce.....	Fort Pierce....	57,482.00	Yes.
The First Natl. Bank of Gainesville.....	Gainesville ..	409,430.24	Yes.
Gainesville National Bank.....	Gainesville ..	215,715.00	Yes.
The Florida National Bank of Gainesville.....	Gainesville ..	310,000.00	Yes.
First National Bank.....	Granville ..	7,392.00	Increase very slow but gradual. Will be larger when boll-weevil is conquered.
Bank of Greenville.....	Greenville ..	24,534.02	Yes.
Bank of Greenwood.....	Greenwood ..	50,000.00	Yes. We want white settlers. Finest country on earth.
Bank of Groveland.....	Groveland ..	12,808.12	Yes.
Bank of Hastings.....	Hastings ..	20,000.00	Yes; 50 per cent. increase in past 12 months.
Havana State Bank.....	Havana ..	7,000.00	Yes.
Citrus County Bank.....	Inverness ..	10,550.60	Yes.
Atlantic National Bank of Jacksonville.....	Jacksonville ..	2,090,940.67	Yes.
Barnett National Bank.....	Jacksonville ..	2,968,155.32	
Florida National Bank.....	Jacksonville ..	1,999,899.38	Yes.
Heard Natl. Bank of Jacksonville.....	Jacksonville ..	558,070.63	Yes.
United States Trust and Savings Bank.....	Jacksonville ..	158,857.71	
American Trust Co.....	Jacksonville ..	99,000.00	Yes.
First-Germania State Bank.....	Jacksonville ..	59,546.22	Yes.
The Citizens' Bk. of Jacksonville.....	Jacksonville ..	172,780.00	
The Guaranty Trust and Savings Bank.....	Jacksonville ..	200,000.00	Yes.
Bank of South Jacksonville.....	S. Jacksonville ..	24,000.00	Yes.
First National Bank.....	Jasper ..	61,000.00	
Commercial Bank.....	Jasper ..	9,547.70	Yes. We are doing all we can to increase the savings disposition.
The Bank of Jennings.....	Jennings ..	7,224.76	Yes.
A. S. Keith & Co., Bankers.....	Kathleen ..	1,500.00	Yes.
The First National Bank.....	Key West.....	227,000.00	Yes.
State Bank.....	Kissimmee ..	51,915.14	Yes.
Citizens' Bank of Kissimmee.....	Kissimmee ..	17,891.00	Slight.
Bank of La Belle.....	La Belle ..	1,300.00	Yes.
The National Bank of Lakeland.....	Lakeland ..	168,407.76	
The State Bank of Lakeland.....	Lakeland ..	33,000.00	Yes.
State Exchange Bank.....	Lake City.....	145,000.00	Yes.
The Columbia County Bank.....	Lake City.....	81,995.70	
The First National Bank of Lake City.....	Lake City.....	161,000.00	Yes.
Bank of Lake Helen.....	Lake Helen.....	28,963.43	Yes. Other deposits over \$40,200; business good.
Bank of Lake Worth.....	Lake Worth....	12,255.12	Yes. Encouraged by banks. We pay 4 per cent. comp. quarterly as an inducement for increased thrift among our people.
Bank of Laurel Hill.....	Laurel Hill....	15,000.00	Slow.
Lawtey State Bank.....	Lawtey ..	3,627.91	Yes. Poor showing at this time, due to continued crop failures and bad marketing facilities.
Citizens' Bank of Leesburg.....	Leesburg ..	60,000.00	Yes.
Leesburg State Bank.....	Leesburg ..	70,000.00	Yes.
First National Bank of Madison.....	Madison ..	110,000.00	Yes.
Citizens' Bank of Madison.....	Madison ..	120,000.00	Yes.
First National Bank.....	Marianna ..	137,000.00	Yes.
The Citizens' State Bank.....	Marianna ..	48,831.21	Yes.
Citizens' Bank.....	Mayo ..	26,254.14	No.
Melbourne State Bank.....	Melbourne ..	3,800.00	Yes. The Melbourne State Bank was organized October 23, 1915.

Name of Bank.	Address.	Total amount of strictly savings deposits.	Is there a tendency toward an increase?	Name of Bank.	Address.	Total amount of strictly savings deposits.	Is there a tendency toward an increase?
The Southern Bank & Trust Co.	Miami	94,000.00	Yes.	People's Bank for Savings	St. Augustine	697,402.72	Yes; slightly.
Miami Bank Trust Co.	Miami	92,288.39	Yes; due probably to extensive local development going on right now.	Commercial Bk. of St. Augustine	St. Augustine	250,076.36	Yes. The tendency is to increase gradually.
Bank of Bay Biscayne	Miami	560,140.72		Central National Bank	St. Petersburg	283,941.54	Yes.
First National Bank	Miami	408,243.46		American Bank & Trust Co.	St. Petersburg	182,556.11	Yes. More than doubled in last year.
The Chaffin Bank	Milton	92,779.28	Yes.	The First National Bank	St. Petersburg	239,122.38	Yes.
Farmers and Merchants' Bank	Monticello	45,173.72	No.	People's Bank	Sanford	89,764.00	Yes.
Bank of Mt. Dora	Mt. Dora	50,050.69	Yes.	Seminole County Bank	Sanford	85,000.00	Yes.
Bank of Mulberry	Mulberry	46,923.69	Yes.	First National Bank	Sanford	151,535.03	Yes.
Citizens' Bank	Mulberry	3,302.05	Yes.	First National Bank	Sarasota	12,121.64	Yes.
Fidelity Bank of New Smyrna	New Smyrna	62,996.20	Yes. Conditions generally good.	Bank of Sarasota	Sarasota	80,000.00	Yes.
State Bank of New Smyrna	New Smyrna	73,494.23	Yes. Our county is growing.	The Bank of Sebring	Sebring	9,500.00	Yes.
Ocala National Bank	Ocala	223,138.53	Yes.	Bradford County Bank	Starke	67,748.10	Yes. Have increased about \$20,000 in past year.
The Monroe and Chambliss National Bank of Ocala	Ocala	234,000.00	Yes.	Bank of Stuart	Stuart	7,023.97	Yes.
Commercial Bank of Ocala	Ocala	86,749.60	Yes.	The Citizens' Bank	Tallahassee	9,523.02	Yes.
Orlando Bank & Trust Co.	Orlando	295,295.18	Yes. We are glad to say that our deposits, both savings and checking, have increased wonderfully in the last year.	Capital City Bank	Tallahassee	20,000.00	Yes.
The State Bank of Orlando	Orlando	436,641.33	Yes. Savings deposits have doubled in last 2 years.	The Exchange Bank	Tallahassee	21,874.71	
The People's National Bank	Orlando	208,668.00	Yes.	The State Savings Bank	Tallahassee	470,602.11	
Bank of Palm Beach	Palm Beach	150,000.00	Yes. About 25 per cent. of customers carry savings account.	Exchange Natl. Bank of Tampa	Tampa	443,641.82	Yes.
Palmetto State Bank	Palmetto	8,500.00	Yes.	First Savings & Trust Co.	Tampa	333,528.75	Yes.
Putnam National Bank	Palatka	300,000.00	Yes.	Bank of Commerce	Tampa	81,000.00	Yes. Our savings account has increased above 20 per cent. in the last year.
East Florida Savings & Trust Co.	Palatka	225,379.14	Slow. Spring crops hurt by dry weather. Savings deposits on June 30, 1916, were \$213,856.96 with us.	Sponge Exchange Bank	Tarpon Sprgs.	55,000.00	Yes.
State Bank	Palatka	50,000.00	Yes.	Greek American Bank	Tarpon Sprgs.	43,530.42	Yes. Deposits in all departments have shown a remarkable increase.
National Bank of Commerce of Pensacola	Pensacola	72,038.53	Yes.	Bank of Terra Ceia	Terra Ceia	4,000.00	Yes.
American National Bank	Pensacola	138,396.33	Yes.	Bank of Titusville	Titusville	25,000.00	Yes. We have a growing section, and naturally the savings, as well as commercial deposits will increase as the wealth of the community increases.
The Banking, Savings & Trust Co.	Pensacola	44,237.21	Yes.	Farmers and Merchants'	Trenton	27,000.00	Yes.
The Perry Banking Co.	Perry	25,000.00	Slow.	Trilby State Bank	Trilby	1,775.00	Yes.
Bank of Plant City	Plant City	105,000.00	Yes. For past two years crop conditions have not been favorable or saving would be better.	Bank of Umatilla	Umatilla	8,000.00	
First National Bank	Plant City	45,000.00	Yes. Bank 3 1/2 years old.	Farmers' Bank of Vero	Vero	6,400.00	Yes.
Hillsboro State Bank	Plant City	139,289.08	Yes.	Watertown Bank	Watertown	12,931.87	We believe that at least 45 per cent. of the total deposit in all State banks and trust companies in Florida are in the savings department.
Punta Gorda Bank	Punta Gorda	11,454.95	Yes. The banks in this section are just beginning, and the next 12 months should show a substantial increase in these deposits.	Carlton National Bank	Wauchula	630.26	No.
First National Bank	Quincy	102,000.00	Yes.	Wellborn Bank	Wellborn	35,000.00	Yes; slight.
Quincy State Bank	Quincy	403,056.91	Yes. Figures taken from our report of June 30 to State Comptroller.	Farmers' Bank & Trust Co.	W. Palm Beach	62,874.75	Yes.
				The Pioneer Bank	W. Palm Beach	203,647.45	Yes.
				Bank of Winter Garden	Winter Garden	101,848.38	Yes.
				Snell National Bank	Winter Haven	81,500.00	Yes.
				Bank of Ybor City	Ybor City	305,000.00	Yes.
				Latin-American Bank	Ybor City	30,106.83	Yes, for time of year. Increase in three months past \$6921.46.
				State Bank of Zolfo	Zolfo	13,566.05	

Observations on North Carolina's Flood Damage.

Raleigh, N. C., July 29—[Special.]—The county of Wake went through the heavy rains well and may be taken as an example of a mid-State county of North Carolina in this respect. Not a bridge of any importance was damaged, and the roads got off well. The main trouble in the State was from the streams which originate on the east side of the Blue Ridge, such as the Catawba and Yadkin, as well as scores of little rivers and creeks. Among the little rivers most affected was Rocky Broad, which traverses the Hickory Nut Gap, where immense damage was done to the splendid road which State convicts recently finished. The Catawba wrecked a good deal of the other State road, also concrete, mainly from Swannanoa Gap to Old Fort, at the foot of the Blue Ridge, this being on the Central Highway. Many hundreds of bridges will have to be replaced in the mountain region. No such an amount of bridge construction was ever before required in this State in one time as will be necessary now.

The streams on the west side of the Blue Ridge, with the exception of the French Broad, gave but little trouble, the great rainfall being on the eastern and southern sides of the lofty mountain wall, where the warm and moisture-laden clouds were condensed. There were such torrents of water falling from the sky that at one place six inches in an hour and a quarter are reported and at another 20 inches in five days, all previous records having been broken.

The lower Yadkin River, from which Raleigh gets part of its power, at Blewett's Falls, was not affected enough to put the power plant out of commission.

Between Raleigh and the coast some of the streams were high, and while not making a record for flood

stages, yet took away some bridges and flooded considerable areas.

The estimate is made that, counting the damage by the flood and rains to property of all kinds, the loss in the State as a whole will approximate \$15,000,000, the railways being the heaviest losers, perhaps nearly one-third of this entire estimate.

FRED. A. OLDS.

State Banks of Arkansas Make Excellent Showing.

Little Rock, Ark., July 27—[Special.]—The reports of the 387 State banks and trust companies made to the State Bank Commissioner upon the last call are the best these banks have ever made.

The increase in the savings deposits from June 23, 1915, to June 30, 1916, is \$1,285,679.88, with aggregate of \$5,104,009.70.

The increase in individual deposits during the same period was \$5,439,294.40; aggregate, \$26,737,385.65.

The increase in the total deposits of all kinds was \$10,526,959.48, with an aggregate of \$49,689,396.37.

The total resources of the banks increased from \$62,625,463.47 to \$70,989,135.86.

The aggregate increase on items of resources was \$8,507,554.37, and decreases in items of resources, \$143,881.98.

The aggregate increases in items of liabilities was \$10,595,831.25; aggregate decreases, \$2,222,158.86.

The legal reserve has increased from 28.3 per cent. to 31.6 per cent.

The amount of gold in the State banks increased from \$329,815 to \$383,828.

The capital stock of all these banks is \$13,289,667.50,

the surplus is \$3,849,015.29 and the undivided profits \$1,583,023.08.

An interesting item is the increase in the loans on cotton from \$283,134.84 to \$904,524.63, while the loans on real estate increased from \$10,854,321.26 to \$11,265,175.43.

Florida Manufacturer Sells Drykiln to Seattle Lumber Company.

The L. Moore Drykiln Co., Jacksonville, Fla., has just closed contract with the Snoqualmie Falls Lumber Co., Seattle, Wash., for eight large kilns 20x104 feet each, with drying capacity of about 150,000 feet of lumber per day. These kilns are to be built under the Moore moist air system of drying.

A good part of the iron equipment used in the construction of these kilns will be manufactured in the Moore company's modern shops at Jacksonville, Fla., and shipped to Seattle.

It is a strong tribute to a Southern-made product that a lumber manufacturer in Seattle should place an order with a drykiln manufacturer in the South, as there is a drykiln manufacturing concern located in the city of Seattle.

This, however, is another demonstration of the fact that with excellence of design and construction Southern manufacturers need not hesitate to go out for a market anywhere their products are required.

The fall meeting of the National Association of Cotton Manufacturers will be held September 14, 15 and 16 at The Griswold, New London, Conn.

The Mexican Situation As Viewed by an Expert

By COURTENAY DE KALB, Mining Engineer, Tucson, Ariz.

[Courtenay DeKalb, a mining engineer and geologist, and for the last 20 or 25 years manager of large mining operations in Mexico and the Southwest for some of the foremost capitalists of the East, is thoroughly familiar with every phase of Mexican life and knows that country as well as the average man knows his own village or town. Mr. DeKalb, as previously stated in the Manufacturers Record, is a native of Virginia, though he has been a cosmopolitan in his investigations of properties. Whatever he writes commands attention, and it is especially interesting in these times to have his views on the Mexican situation, for probably no man in America is more familiar with the inside of Mexican affairs. The following article is made up of extracts from two personal letters not intended for publication, and, therefore, written with a freedom which makes them all the more important. By reason of the statements in regard to the continued importation into Mexico of arms and ammunition, and others, showing how little our country has understood the whole situation, permission was secured from Mr. DeKalb by wire for the publication of these extracts.—Editor Manufacturers Record.]

Nothing how earnestly you preach protection for the South, I wish to define my own attitude more clearly. I believe that any man may find that his vision lengthens and broadens by admitting idealism to intimacy with him, at the same time remembering that the facts of the world as it is must be dealt with. You will recall how Chesterton found two reasons why we should love our neighbor as ourselves; one is because it is so plainly proved as a righteous necessity in the Scriptures, and the other "because he is there, and his presence can best be reckoned with by not having a quarrel with him."

I have been a consistent Democrat and a consistent protectionist for years and years; yet candidly I do not believe in the fundamental correctness of any democracy that I have ever seen, nor in the justice of any protection in the abstract. I do believe, however, that democracy in the concrete is a workable and desirable form of government, and that without protection in a world of protectionist nations we would be the starveling slaves of the foreign masters of commerce.

The Mexican situation has developed another cloud. President Wilson has once more fallen into a clever snare set by Carranza. When I recently wrote you that Carranza was a rascal I might have added that he is an astute one. In the name of "arbitration" we are to have a conference without power and which cannot have powers because it is made up of opposite partisan representatives, that can do nothing but parley and agree to some vague thing that will never materialize in a new bond which we are bound to accept as law, which can never bind the Mexican nation because there is no competent constitutional authority in Mexico, and which can never result in an agreement which the people along the border will recognize save under military compulsion, because the privilege of invasion of our territory by Mexican troops and officers is merely to lay the border open to perpetual aggression.

When an agreement was made, many years ago, permitting us to follow "the hot trail" into Mexico, it was with reference to conditions which do not exist today. Apaches and old-time horse thieves are a different breed from the men who have made trouble along our border of late. There were no politics in those raids, as there is today. The principle of the "hot trail" at this time is a false one to follow. Let us protect our border and stop at that.

Under this clever ruse of misnamed arbitration Carranza gains time, gains admission of imports for his country, so that canned salmon with cartridge sauce may be shipped freely—and plainly no one would spoil salmon by opening the cans for inspection! Hay has also been found useful as a means of smuggling arms across, for it would take an army of inspectors to unload every car to see what lay behind the outer wall of bales. Some time ago, when the Mexicans were running a stream of autos over the lonely Indian Oasis road to the border, I asked the major in command of the little United States army post at Arivaca why he didn't overhaul these cars, which everyone knew carried contraband of war, and he said, "we haven't one-tenth enough men to make the inspection of the cars going over this road." The same is true at the ports of entry, where smuggling goes on continually under the guise of ordinary commercial shipments. I know of four carloads of hay in a train of twelve carloads of merchan-

dise crossed at Naco not a great while ago, which were merely carloads of rifles, as was seen when the cars were unloaded by the Mexican consignee at Cananea.

Further, Mr. Wilson now proposes to reform Mexico from within! How will he do it? Incidentally, what will become of that cardinal principle of his to let the Mexican do what he likes in his own country? Why should we, then, reform him? How is he to reform Mexico from within when the man he recognized as dictator is opposed to the one reform which the Mexicans demand and for which they have been fighting these five years?

Aside from the love of adventure, and the joys of loot, and the appeal to the savage nature in man which has helped to fill the contending ranks, the real strength of every one of the revolutionary leaders has been the faith he has been able to inspire that he really meant to carry out the radical agrarian reforms so ostentatiously set forth in the carious "plans" or platforms which constituted the revolutionists' pronouncements.

We must remember that Carranza is one of the few remaining great landed proprietors in Mexico, and that his vast estates were obtained by that peculiar Mexican process of declaring the tribal grants null and void for lack of existing titles, and then denouncing these lands before the Minister of Hacienda as "baldio," i. e., open for location. In this way the lands were stolen from the workers, born on the soil, supposedly its inheritors, and they then had to work for the great proprietor at his price or get out. This abuse has been the motive for continuing revolutions, one following another in such apparently incomprehensible sequence as leader after leader has raised armies, each proclaiming the same reform, only to be deserted by his adherents after it was seen that he had no intention to really distribute the lands.

I am not arguing for such confiscation; the dreams of the poor in regard to these lands are not easy to realize without a complete subversion of all possessorial rights; but there can be no settlement of the troubles of Mexico from within that does not provide for satisfaction of this demand of the proletariat, or for the subjugation of the poor under an iron rule of a kind that no President of the United States would dare uphold.

Surely this is a political dilemma. Mr. Wilson has revealed a lack of appreciation of the true facts of this Mexican revolution by his declaration, which brands him as being as much a political Don Quixote as if he should undertake to establish the Republic of Plato south of the Rio Grande.

It is most interesting to hear the various comments upon the Mexican situation since the "fizzle." The prevalent opinion is that it was a farce. I know that you look deeper, and seek the facts underneath the current. We hear some who are wise in the ways of the Mexican, realizing that the country is very short of provisions and that this is the time of the year for planting corn and beans, stoutly maintaining that the war was called off until the autumn, so as to give a chance for replenishing the larder. Others are equally sure that Carranza wanted time within which to accumulate more ammunition. Meanwhile there are increasing evidences of Germanic activity in drilling the Mex-

ican army, and German emissaries are said to have been sent to instruct the Mexicans in the use of poisonous gases and other diabolic inventions to make war frightful. Back of it all are diplomatic secrets which we can only guess at. I feel very sure that it was Germany who precipitated the crisis that looked so ominously like war, and that it was England who dissipated the imminent danger. * * *

You must have been pained at Wilson's address before the World's Salesmanship Congress at Detroit on July 10. It was adroit, as his utterances are prone to be. He does not precisely say that he will not protect Americans in their rights in Mexico, but that is what everyone will read into his words. He says Mexico "is justified in her belief (that we wish to possess her) from the way in which some of our fellow-citizens have tried to exploit her privileges and possessions. For my part, I will not serve the ambitions of these gentlemen, but I will try to serve all America, so far as intercourse with Mexico is concerned, by trying to serve Mexico herself."

I hold suspicions of the integrity of purpose of any man who deals in cryptic phrases at a time when the enunciation of a crisp plan of action will tend to relieve the public tension and give to our antagonists a clear conception of the intentions of the Government. The relations between this country and Mexico are at present in acid solution, and what is needed is a good strong alkali to effect precipitation. Wilson's remarks are merely neutral, and will precipitate nothing, clarify nothing, neutralize nothing. There have been gross violations of neutral rights by corporations in this country that have fomented, connived at, financed revolution in Mexico for the hope of gain. Is there no law by which such crimes can be reached? Must innocent investors in good faith suffer abandonment by their Government because some have done evil?

Wilson says that he believes "that a people has the right to do anything they please with their own country and their own government." I believe that, too, within certain limits; but when a country ceases to live within a Chinese wall and seeks recognition by treaty with foreign powers its cloistered independence has been impaired by the assumption of new rights and duties. When Mexico enters into a treaty of amity and commerce with the United States she has given to our citizens certain rights defined by that treaty, and the only guarantee of such rights by treaty lies in the willingness and ability of this country to demand that these rights be accorded and to insist that they be respected. It seems perfectly plain that the rights of foreigners under such treaties are those guaranteed by the laws as they existed at the time when the treaty was ratified and as subsequently modified by constitutional powers. If a state of revolution intervene, the rights of the foreigner remain subject to the pre-existing law until new competent powers be erected which shall be recognized by the other contracting party. No one will surely affirm that Carranza is at the head of a constitutional government. In recognizing him he was merely made a party to the carrying out of certain treaty engagements which had subsisted prior to his accession to power until such time as a constitutional government should be established in Mexico. It is inconceivable that we would admit his privilege to modify the rights of our citizens, guaranteed by previous treaty, according to his whim expressed in arbitrary decrees.

Mr. Wilson says in the same address: "The time for provincial thinkers has gone by. We must play a great part in the world, whether we choose it or not." He informs us that we must go forth to the peaceful conquest of the world. How are we to do that if our treaties of commerce do not give us the guarantees of the legally constituted municipal law of the lands with which we have exchanged such diplomatic courtesies? When a foreigner fails to abide by the law of the land of his temporary domicile he is liable to be judged by that law, but in the case of Mexico the law has been superseded by decrees issued by men who do not represent the constitutional authority, and decrees are made to fit the special hostility which has developed against the American just because of his nationality. His treaty rights are not given him, and there is no assurance that this Government intends to sustain him in those rights.

We will never play a very great part in the world until we demonstrate that when we enter into a treaty with a foreign power we believe that the other party to the contract is bound by it equally with ourselves. The single foundation of any contract is the confidence

that there exists a power competent to judge the contract and enforce it. Remove this confidence, and trade sinks to the low level of barter, fit only for adventurous men who have no expectation of establishing permanent business relations abroad. It comes back to the conditions of wandering caravans, sneaking through with their bales of merchandise, hoping by good luck to escape the bandits on the road and the exactions of grafting officials in the towns.

I am not arguing for war. I do not clamor for intervention in Mexico. I would avoid war with all the zeal that Mr. Wilson has displayed in trying to avert a clash. A war with Mexico would be a great calamity; yet we certainly can never play that great part in the world's commerce that Mr. Wilson sneaks until we make it clear that we regard treaties of amity and commerce to mean what they say. A few straightforward utterances, showing a determination to sustain our rights abroad, set forth not in a spirit of hostility, but in calm

judicial language, would go far toward clarifying the situation, whereas refined phrases which one needs to interpret as if they were a Delphic oracle, only invite fresh aggressions and prolong the period of anxiety and doubt.

The present Administration is not alone in its culpability in this regard. Mr. Taft was likewise timid and halting in his policy. Not once has there been a definite statement made by our Department of State that we expected Mexico to observe her treaty relations with this country, but over and over again has the Government announced that it would not protect American dollars in Mexico, and that it would not intervene for the protection of Americans and their interests. Simple silence on these points would have had a most salutary effect. The mere fear of what might happen would have restrained the Mexicans, and the excesses that have brought war so near would never have been committed.

Congressional Action Pending to Safeguard Bills of Lading

[Special Correspondence Manufacturers Record.]

Washington, D. C., July 29.

A law to make a bill of lading a bill of lading would be a proper designation of the bill which passed the United States Senate on March 9 and favorably reported by the Committee on Interstate and Foreign Commerce of the House. The Supreme Court of the United States—and the decision has been followed by many State courts—has decided that a common carrier whose authorized agent has issued a bill of lading acknowledging the receipt of goods can, where the goods have not been received, deny liability to a bank or other bona fide purchaser who has advanced money in reliance on the statements in the bill of lading. Thus it appears that a receipt for goods is not a receipt when the goods have not been received.

The South is more particularly interested in safeguarding bills of lading than any other section of the country. The South produces the one crop in whose shipment particular use is made of the bill of lading with draft attached. The South should be jealous of the integrity of the instrument of which it makes such extensive use in turning cotton into cash.

The bankers of the United States advance annually over \$5,000,000,000 against bills of lading. If the foreign trade of this country grows, as it seems destined to grow, the sum so advanced annually will presently be doubled. But if this business is to be increased it is highly important that bills of lading be made safe instruments. This can only be done by making the carrier responsible when his authorized agent has issued such a bill representing on its face that goods have been received for shipment. The alternative would not seem to be a very serious thing for the railroads. It would not seem to be a hardship to hold a railroad responsible for certifying that goods have been received for shipment when in reality they have not.

Under the conditions that obtain now there has come into existence what is known as an "accommodation bill of lading," a euphoniously named document which solemnly assures the buyer or the banker, who is asked to advance money against it, that the carrier has received, say, 100 bales of cotton, duly marked, weighed and consigned, whereas every statement contained in the bill is absolutely false. Such bills, certifying to such a state of facts, are commonly issued when no cotton whatever has been received and even when the shipper has told the freight agent that he cannot deliver the cotton but that he desires the bill of lading to draw against and he will supply the cotton later.

This custom has doubtless grown out of a desire of shippers to obtain banking documents. Carriers have been willing to grant the accommodation in order to obtain the business, and so the bill of lading, issued by American railroads, has become the most unreliable receipt known to business. Of course, in the majority of cases where the accommodation bill has been issued the cotton is ultimately delivered, but the system which permits the issuing of bills of lading before the goods described in them have been received is utterly wrong, in the minds of bankers, and the American Bar Association

as well as the American Bankers' Association and many organizations of shippers have urged the passage of the bill referred to.

An instance used by the promoters of this legislation to illustrate their arguments was the case of a New Orleans firm. This concern was a large exporter of staves. They shipped from two or three points on the Gulf to various companies in England and on the continent. Being unable to borrow from bankers either in the United States or abroad sufficient money to keep them going, a member of the firm induced the agents of two steamship lines to issue to him "accommodation bills." His method was to state to the steamship agents that he had so many thousands of staves on hand, which, however, he was not ready to ship immediately, or that the company did not have a steamer available for immediate loading. If the agents would give him the bills of lading he wanted he would give them an agreement to hold them harmless in case any difficulties arose as the result of their not having received the goods. At the same time he entered into a collusive agreement with several concerns abroad who, while actually his confederates, posed as buyers. The firm drew against these alleged buyers and to the drafts attached the "accommodation bills of lading." The drafts ran as usual for 60, 90 or 120 days. When the drafts were presented to the confederates abroad they were, of course, accepted. The "accommodation bills of lading" were then detached from the drafts and the latter were then rediscounted, while the bills of lading were returned to New Orleans. Thereupon the firm would take the bills of lading back to the agent of the carriers who had issued them, surrender them for cancellation and obtain back the agreements of indemnity. The amount of perfectly worthless paper which the firm disposed of cannot be estimated with any degree of accuracy, for the system was in operation for over four years. It was reported, however, by one of the trustees in bankruptcy that the losses would probably total about \$5,000,000. At the time the frauds were discovered these "accommodation bills" were being issued at the rate of \$35,000 or \$40,000 a day.

How important the bill of lading is as a trade document and how dependent bankers are upon the honesty of the statements made in the bill is evidenced by the ease and celerity with which a bill of lading can ordinarily be negotiated. A prospective borrower at a bank will not only be asked for collateral security, but the collateral will be examined with great care even if it happens to be standard bonds. No banker will take a chance on such a loan without assuring himself as to the form and the value of the collateral. But if a cotton shipper in the South or a grain shipper in the North wants an advance against a shipment, which is represented only by a bill of lading, the bill of lading is accepted without much attention being given to its form or its signature. In this country there are 240,000 miles of railroad. There is probably a station for the receipt of freight every 20 miles. This means that there are over 12,000 stations and a similar number of

station agents. There is no method by which a banker in New York, Chicago, New Orleans or any other banking center can know that any particular bill of lading offered to him is not a forgery. No banker can possibly collect for his own use a complete file of the signatures of every authorized railroad agent in the entire country, and if such a list were obtained it would not remain accurate for more than 48 hours.

It is for these reasons that bills of lading are now, and have been for years, accepted blindly by the banker and buyer, who trust solely to the honesty of the drawer or endorser of the accompanying draft. Such bills of lading may contain the forged signatures of railroad agents or the names of fictitious persons and the bankers are no wiser. One case was recited in which a Southern bank discounted cotton drafts with the accompanying bills of lading enclosed in sealed envelopes. The reason for this was that an employee of the bank was also interested in the cotton trade, and one customer refused to use the bank if his bills of lading were disclosed and his competitor might, therefore, learn the names of the consignees. In this case collateral valued at many thousands of dollars was accepted without being looked at at all.

Of course, the noted forgeries of cotton bills in 1912 were cited. These operations began in 1906. The people were large cotton shippers, and, having speculated and lost, found themselves unable to fulfill their contracts. Needing ready money to purchase cotton which they had contracted to ship, they resorted to the simple device of making out and signing bills of lading without bothering the agents of the steamship lines or railroads. Having the bills of lading, they drew against the customers abroad to whom they had sold cotton. With the money obtained by the discount of the drafts they purchased the cotton to cover contracts already existing, but this use of the money, of course, left the forged bills of lading outstanding, and to cover these no cotton had been shipped. To obviate this difficulty more bills of lading were forged and more drafts discounted, and cotton purchased with the proceeds. This cotton was marked with the same marks appearing in the bills of lading previously forged and then tendered to the railroad at the station whose name appeared in the forged bill. A valid bill of lading was thereupon issued by the railroad agent. This valid bill was suppressed and the cotton went forward and was delivered to the holder of the forged bill. By this method the shippers were always one shipment behind, but their customers were thousands of miles away and the system was followed with absolute success for more than four years. In the end it was detected by mere accident. When the bubble finally burst the shippers were only 60 days behind in their shipments, but there were approximately \$5,000,000 worth of bills of lading outstanding on which not a pound of cotton had been shipped.

It is not surprising that under such circumstances most serious efforts have been made to induce Congress to pass the bill first referred to. There is a prospect of success this year, although substantially the same bill was introduced in the Sixty-second and Sixty-third Congresses, and in both of them passed the Senate unanimously; but in neither Congress was the bill reported out by the House Committee on Interstate and Foreign Commerce, to which it was referred after passing the Senate.

For many months the business leaders of the nation have been giving close study and careful consideration to the methods and means whereby the trade of the United States with foreign nations might be increased and might be got in a condition where it would continue to increase for an indefinite time to come. It goes without saying that honest methods and safe methods are conditions precedent to the development of business. A document that is accepted by banks as the basis of credit should, of all documents, have thrown around it all the safeguards that are possible. Most of all, it should not be the subject of forgery with no chance of punishing the offenders.

Collars, Shirts, Shoes, Novelties, Etc.

Manuel Perez, Egido No. 23, Habana, Cuba:

"The lines of goods that interest me most are shoes and foot coverings; shirts; collars; haberdashery; laces; novelties and things new to us, from the American market. Some dealers hesitate to handle an article not already introduced, but my idea is to first get the goods in stock, then to get them on the market. I hope the above suggestion may find a place in your columns."

News and Views from Our Readers

A Hot Denunciation of Free-Trade's Effect on Louisiana Sugar.

ADRIEN GONSOLIN, President The Maria Central Factory & Railway Co., Manufacturers of Sugar, Syrup and Molasses, Buyers and Growers of Sugar-Cane and Dealers in General Merchandise, Loreauville, La.

We American citizens are not yet ready for free trade. We can make and raise whatever we need at home if we can be sure that the National Government will take care of its people first and do for the other nations whatever they can afterwards. But first of all, we want to be sure that American industries and products are protected.

I have passed through two Democratic administrations, the first being the Cleveland administration, which very nearly ruined myself and all of my cane farmers, and it took me 10 years of hard work to pull through the harm worked by the Cleveland administration. But the present Democratic administration, the great Wilson free-trade administration, has ruined myself and others in our section perhaps forever. We had our Maria Central Factory & Railway Co. built as an up-to-date factory in 1911, at an outlay of some \$390,000, and as we were in debt, neither ourselves nor our cane farmers could get assistance from the banks or capitalists on account of the fear of free sugar which had been promised us by the great Wilson Democratic administration for May 1, 1916. So all of our cane farmers had to get out of the cane business. Therefore, our up-to-date sugar factory, with a capacity of 1000 tons of cane per 24 hours, had to be sold at a sacrifice price in order to pay off a part of our indebtedness. Our factory was sold a few months ago for \$129,000, leaving a debt due on the land of \$28,000, which we have to work the hardest to try and save. If it were not for the European war, that brought the price of sugar up, I would surely have been thrown out on the road to work by the day, at my advanced age of 66 years, to earn a living for myself, wife and two children dependent upon me for their support.

The high cost of sugar now on account of the European war proves conclusively that if we had the protection which the American citizen and the commerce of the country need we would have grown more sugar in the United States and the price of sugar would not be so high today.

Let us hope that we will elect a Republican President, Senate and House this fall, so that they may be able to legislate against these free-traders, and that we will once more enjoy the protection so much needed. While it is too late for myself and a great many others who have been sacrificed as we have been, however, it will be a source of much pleasure to me to see my conferees enjoy the real prosperity that will be brought about by the beneficent effect of a good Republican administration.

While our State has the Democratic-aristocratic ideas imbedded so deep, though they are starving under the policies of this Democratic rule of free trade, I for one will vote and work heart and soul for the success of the Republican ticket this fall, and while there is no use in counting on having Louisiana vote otherwise than for the foolish Democratic policies, I am in hopes that the North, East and West will roll up big Republican majorities this fall for the President, Senators and Representatives and kill the Democratic party for all time to come.

Suggests Armor Works and Navy-Yard on Ohio or Mississippi River.

CHAS. J. RICE, Superintendent of Norton Iron Works, Blast Furnace Department, Ashland, Ky.

In your answer to Mr. Schwab about an inland munition and armor plant you mention shipbuilding on the Pacific coast as if that was the only outlet, provided New York, Philadelphia and Baltimore were in the hands of an enemy.

It occurs to me that the great waterway of the Ohio and Mississippi rivers, being inland and behind the protection of the Allegheny Mountains, should be the place to build munition and armor plants and a navy-

yard also. If an enemy should destroy our present naval force, with plants already established, it would not be long before we could build and send down these rivers a fleet of fighters that would win back lost prestige on the sea and help regain lost territory in the East.

Ashland, Ky., lies west of the Alleghenies, and already has an iron and steel industry commensurate with the total navy needs of the United States. Although it now uses lake ores for economic reasons, yet Tennessee has enough ore west of the mountains to supply its furnaces for years. Besides these ores, Missouri has much ore available to help out the supply, and can be delivered nearly the whole way by water.

Your contention that we should go west of the mountains with some of our preparedness is a wholesome, sane and patriotic one, and I wish you success in presenting your arguments to the lawmakers of the country, so that they will not have all their "preparedness eggs" in one basket.

I hold no brief for the advertisement of this locality, and am moved to write from patriotic motives only.

Flood Damage Around Asheville.

N. BUCKNER, Secretary Asheville Board of Trade, Asheville, N. C.

Asheville proper has not been "touched" by the flood, although the pocketbooks of many of our residents have been "touched."

The damage done was immediately along the river banks of the French Broad and Swannanoa, where industries and wholesale houses were damaged by the rushing flood, the like of which has never been heard of in this part of the country before.

The Carolina Machine Co. had its large wooden structure washed away, as did the English Lumber Co. Only the manufacturing establishments in wooden buildings suffered. Brick buildings did not suffer, except by standing water. Two wholesale houses suffered considerably by the flooding of their cellars.

Water stood in the passenger station about seven feet deep, and this is the first time in history that water has reached the passenger station. In less than 36 hours the city was flooding the streets in front of the depot, and the depot itself was being cleaned with hose and Asheville's incomparable water system from Mt. Mitchell, which was absolutely undamaged.

We are organizing a holding company here to give assistance to some of the industries damaged. This is the first time in history we have had a flood of such proportions, and it will probably never occur again.

Should Be Read by Everyone Who Wants to Keep Informed.

JAMES G. GAUNT, Architect and Engineer, Florence, Ala.

You will find enclosed a check for \$4, for which you will please renew my subscription to the MANUFACTURERS RECORD.

I have read your paper with great interest, and everyone wishing to keep up with the every-day happenings (in the commercial world especially) should read the MANUFACTURERS RECORD, especially those interested in the great preparedness movement. This applies to every free-thinking man of the every-day walk of life, and I think your RECORD is the best paper published.

Wants Manufacturing Site South.

J. A. CAMPBELL, Moser & Cotins, Utica, N. Y.

We are interested in securing information about a possible site for a manufacturing plant in the Southern States. We wish to know about labor conditions, power, shipping facilities of the town in or near which the factory site may be located.

Any information that you can give will be cordially appreciated.

Instead of More Manufacturers Records, Better More Subscribers and Readers for the One There Is.

A. T. FELT, General Secretary Chamber of Commerce, Alexandria, La.

I read your journal with a great deal of interest each week, and I know of no other medium that is doing so much real successful constructive work for the South. The pity of it is that we haven't more MANUFACTURERS RECORDS or journals that will steadfastly stick up for the South in every particular.

If the public press of the South would continually boost and print the opportunities such as you are doing, the development would be much quicker and the present rate of investment of foreign capital would be much increased.

The South has the best opportunities of the United States undeveloped today. No one has to misrepresent them. All that is necessary is to tell the truth and keep everlastingly at it. We trust that other papers and journals will follow the lead that the MANUFACTURERS RECORD has set. Then the next decade will witness the greatest progress in the South that has ever been made.

No Midsummer Dullness in San Antonio Building Operations.

GEO. J. ROARK, Assistant Secretary Chamber of Commerce, San Antonio, Tex.

Along with great activity in residence construction here, it is stated that San Antonio is to have one of the most modern and largest apartments in the South. The plans have been accepted, and call for the erection of a five-story building, housing 45 individual apartments, and each is to be an outside apartment. According to the architect's drawing, the building will be a valuable addition to the beautiful buildings and homes of San Antonio. The cost complete will be \$100,000. Built-in disappearing beds, kitchenettes and sleeping galleries will be among the features of the building. The large number of winter tourists and visitors who make their home in San Antonio every winter is directly responsible for the demand for the most modern apartments.

Another modern, but smaller apartment, built of brick and concrete at a cost of \$20,000, is nearing completion.

The San Antonio Traction Co. is now beginning trackage improvements and street paving that will cost \$100,000.

The San Antonio Gas & Electric Co. is building a \$25,000 addition to its offices.

Contracts have been let and construction begun on additions to four of the ward buildings of the public school system, which will cost a total of \$30,000.

The Lanier Hotel, a six-story fireproof structure, is under construction at a cost of \$100,000.

The Southern Club expects to build a clubhouse to cost \$120,000 on 250 acres reserved at Medina Lake, near San Antonio.

The Express Publishing Co.'s building is about to be constructed at a total cost of \$50,000 for building and fixtures.

On account of the big troop mobilization at Fort Sam Houston, San Antonio presents a very busy front, and from expressions heard, the soldiers of the North and East are surprised to find such a metropolitan city so far down in the southwestern section of Texas and the United States. San Antonio will profit much from the good things these soldiers tell the folks back home.

\$200,000 Soda Ash Factory.

Approximately \$200,000 will be the cost of a soda ash factory which the Ohio Valley Alkali Co. will build at Huntington, W. Va. This corporation has been chartered with a capitalization of \$350,000. It is a subsidiary of the Glass Brick Co., Huntington, which will consume the output of soda ash used in manufacturing glass. The incorporators are H. E. Marble, F. Mayer, A. C. Rolges and N. H. Maxwell of Cincinnati and P. Barton of Norwood, O.

Warrior River Improvement to Benefit Vast Territory

WORLD'S GREATEST CANALIZED RIVER PRESENTS IMMENSE POSSIBILITIES
FOR COMMERCIAL AND INDUSTRIAL DEVELOPMENT

[With the completion of Lock 17 on the Warrior River a great interior waterway, with all-the-year navigation, was opened from the Gulf at Mobile into the heart of the coal and iron fields of Alabama at an expenditure by the United States Government of some \$14,000,000. Considerable traffic has developed, but it is pointed out herewith that if modern terminals were to be constructed at every trading point along the route the development would be vastly increased. The possibilities are interestingly reviewed in the article Mr. Johnston has furnished.—Editor Manufacturers Record.]

By RICHARD F. JOHNSTON, Birmingham, Ala.

When, in April of 1915, the United States Government closed the gates of Lock 17, on the Warrior River, 388 miles north of Mobile, it had completed the canalization of that river to a minimum year-around depth of 6½ feet and put into operation the longest and in many of its stretches the widest and deepest canal in the world. This work cost between \$13,500,000 and \$14,000,000, but, as Secretary of Commerce Redfield, upon a recent visit to Alabama, remarked, "it has placed Birmingham, Tuscaloosa and other cities close to the Warrior upon the map of the nations."

Alabamians have been slow to take advantage of the Government's gift, and they are still slow, but the awakening is coming gradually and with force. The city of Tuscaloosa is building a hard paved way to its docks to minimize the cost of delivery to wholesale houses. At Cordova, in the heart of the Warrior coal basin, coal terminals have been built. Eutaw has built warehouses and a good road to the river. Greensboro and other river towns are reaching out for a real river connection. The city of Tuscaloosa is already profiting by lower rates on grain products from the West, sugar and coffee from New Orleans and hardware and general merchandise from the East.

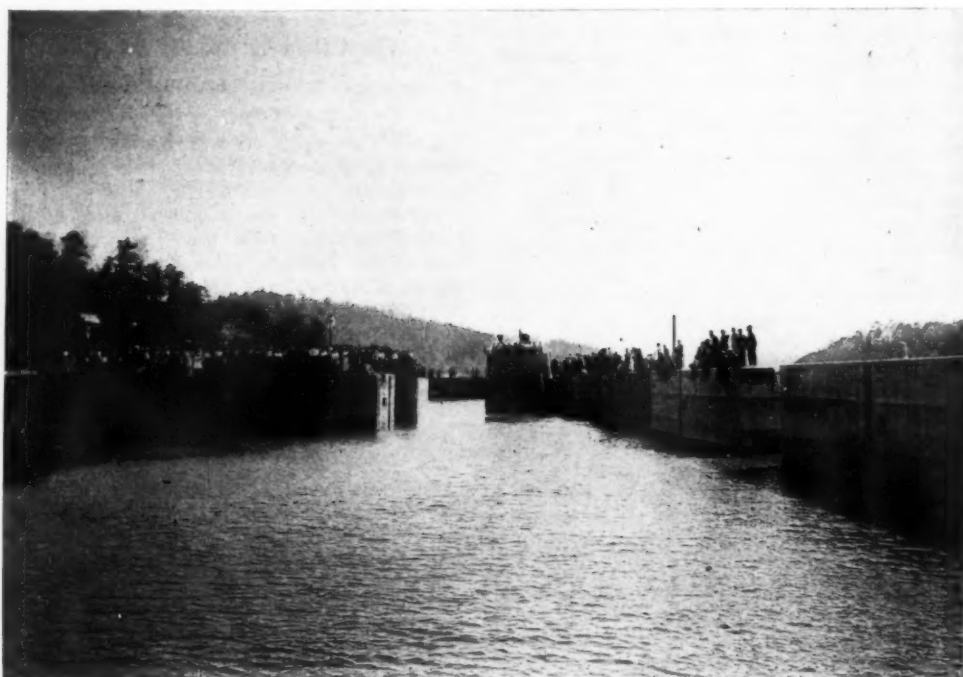
Immense sawmills have been established near Tuscaloosa and are floating timber down the river. Several large coal operators are making regular shipments in an increasing ratio. Birmingham has finally made a start toward the river. On June 23 the county board of revenue took steps to immediately build a road to the river at Nichols Fish Trap, on the Locust Fork, which is just 10 miles from the western limits of the city, and to build another to Taylor's Ferry, on the main river, 25 miles distant. The latter road will serve Bessemer and the Bessemer district as the Nichols Fish Trap will serve Birmingham.

The head of navigation on the Mulberry Fork of the river is at Sanders' Ferry, six miles north of Cordova, in the heart of the Warrior coal basin, which is estimated to contain 500,000,000 tons of coal available for water transportation. This is 444 miles north of Mobile.

The head of navigation on the Locust Fork is a little above Nichols Fish Trap, which is 425 miles north of Mobile and 10 miles in an air line from the western edge of the city of Birmingham at Wylam, where the Tennessee Company has some of its largest works. Including the two branches of the river, the total length

of this stretch of inland navigable water is about 600 miles.

There are 17 locks on the Warrior. Each has a uniform width of 52 feet, with lifts varying from 12 and 14 feet to 21 in Lock 16 and 63 in Lock 17. Lock 17 is a double lock, with two lifts of 31½ feet each. This immense piece of masonry was built by the Hard-



VESSEL PASSING THROUGH THE GATES OF LOCK 17 DAY OF DEDICATION, LAST MAY. GUARD WALLS ON RIGHT PROTECT CRAFT ON ENTERING THE LOCK.

away Contracting Co. of Columbus, Ga., and cost about \$3,000,000. It is all stone, concrete and steel. It was so constructed, with interior chambers, etc., as to be available for hydro-electric purposes whenever it is determined to install power there. It is estimated that 18,000 horse-power could be generated without difficulty.

Lock 16 is just two miles below Lock 17. It follows

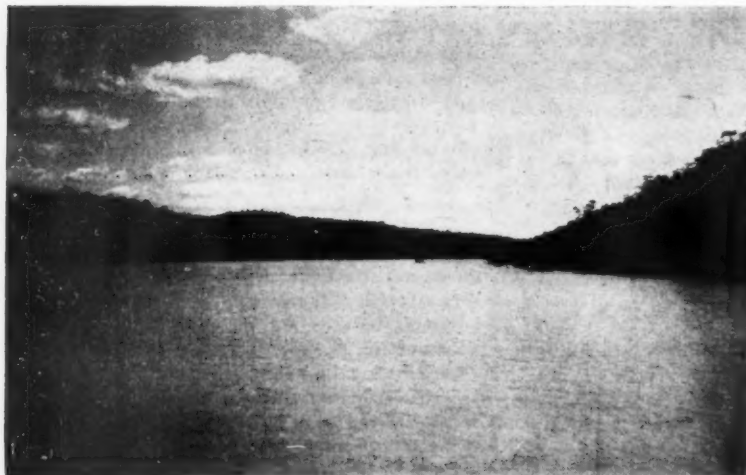
that, when water flowed over Lock 17 the Warrior River had, within a space of two miles, been lifted a total of 84 feet above its original bed.

When Lock 17 filled it created what is known as Lake Bankhead, so named after the United States Senator who devoted the better part of a lifetime to securing the appropriations for the river. This lake is from several hundred yards to nearly a mile in width, and its banks are steep and covered with heavy woodland. United States Engineer W. A. Crossland has declared that this lake and many other aspects of the Warrior rival the most beautiful and picturesque scenery in Switzerland. In addition to creating Lake Bankhead, the water was backed up the Mulberry Fork 40 miles and up the Locust Fork 20 miles. On each of these forks there are coal seams abutting upon the river banks and vast virgin timber tracts.

The first coal corporation to use the river was the Pratt Consolidated Company, which had a few barges of the regular river type and a towboat ready by the time the lock was completed. This company has since been regularly shipping coal from Maxine, 18 miles west of Birmingham, on the Locust Fork, to Mobile and New Orleans. The route to New Orleans is via the Mississippi Sound, which is protected from the Gulf by a string of islands, and thence through the Lake Borgne Canal. However, as the canal is under private

ownership and levies a toll on all vessels except its own self-propelled barges, the Pratt Consolidated and other coal operators joined in the organization of a shipping concern with oceangoing as well as river barges, so that entrance to New Orleans may be effected by the river instead of the canal.

The Tennessee Company for some time has been making regular shipments of coal to New Orleans in



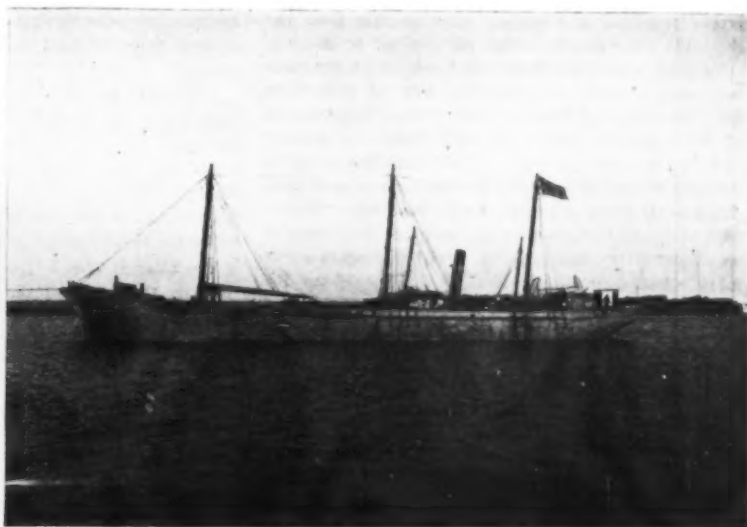
LAKE BANKHEAD, FROM SEVERAL HUNDRED YARDS TO NEARLY ONE MILE IN WIDTH AND FIFTY MILES LONG, FORMED BY THE WATER BACKED UP BY LOCK 17.



TYPE OF SELF-PROPELLED BARGE OF THE ALABAMA AND NEW ORLEANS TRANSPORTATION CO., BOUND FOR NEW ORLEANS WITH A LOAD OF 1000 TONS OF TENNESSEE COAL, IRON & RAILROAD CO.'S EDGEWATER COAL.



TYPE OF TOWBOAT USED BY THE PRATT CONSOLIDATED COAL CO. FOR TOWING COAL BARGES DOWN THE WARRIOR RIVER.



AN OCEAN-GOING BARGE LOADED WITH WARRIOR RIVER COAL. TYPE USED IN CARRYING WARRIOR RIVER COAL TO GULF AND CUBAN PORTS.

the self-propellers of the Alabama & New Orleans Transportation Co. The coal is taken to the river from nearby mines in cars of the Ensley Southern, and, by permission of the Government, a chute was made in the railroad bridge and the coal is dumped into barges through this chute.

The De Bardeleben Coal Co. has purchased towboats and barges, and is shipping coal from its mines on the Mulberry Fork of the river.

The Birmingham Slag & Cement Co. has purchased several schooners, and will enter the seagoing trade to Cuba and Latin-American points. The oceangoing barges have made several trips carrying coal to Tampa and Key West and Cuba with success.

Among the industries on the Warrior River, which have river transportation at their very doors, is the Central Coal & Iron Co., whose blast furnace and iron pipe shops are on the river banks at Holt, near Tuscaloosa.

The Export Mining Co. has a mine near Lock 16, whose piers, extending over the river, load simultaneously barges in the river and coal cars of the Warrior Southern on the banks of the river. This company was the first river coal shipper, having used the self-propellers when they made their maiden appearance upon the river.

What the river holds forth in the way of freight-rate reductions has already been shown in the case of the city of Tuscaloosa. A comparison in rail and water rates actually in effect on goods received at that place was made by United States Engineer Geo. K. Little, with the following findings:

- Grain and grain products from St. Louis—by rail, 28 cents; by river, 22 cents.
- Grain and grain products from Memphis—by rail, 22 cents; by river, 16 cents.
- Grain and grain products from East St. Louis—by rail, 28 cents; by river, 22 cents.
- Rice from New Orleans—by rail, 29 cents; by river, 22 cents.
- Coffee from New Orleans—by rail, 49 cents; by river, 32 cents.
- Sugar from New Orleans—by rail, 23 cents; by river, 22 cents.
- Canned goods from Baltimore and New York—by rail, 54 cents; by river, 42 cents.
- First-class freight from New York—by rail, \$1.43; by river, 91 cents.

The same rates would apply to Birmingham landings. The grain from St. Louis and Memphis classified under the "by river" heading goes to Mobile by rail and comes thence up the river in water craft. Tuscaloosa wholesalers have been enabled, by reason of the lower grain rates, to undersell Birmingham wholesalers in Bessemer, which is just 10 miles south of Birmingham.

While Warrior River traffic has not begun to grow as it should, it has increased with each month. The tonnage through Lock 17 last May was 833 tons. The following are the official records of tonnage passing through Lock 17 for the months named:

Month.	Tons.
August	12,886
September	20,652
October	21,536
November	20,425
December	24,483
January	27,039
February	27,607

Later figures will show a further increase.

The Birmingham plan, which has seen its inception in the steps taken by the county board of revenue to build roads to the river, is this: To build a hard-paved way upon the chert roadbed built by the county board. A double-track electric freight and passenger line is to be constructed and the strip of land enclosing the paved street and the electric line is to be annexed and brought into the city. The tract to be annexed is that which will lead from Wylam and Ensley, on the western limits of the city, to Nichols Fish Trap, which is 10 miles distant by air line and is 15 miles by the proposed road.

Private parties have already projected an electric line, which will start from the river at the Fish Trap and run northwesterly through Walker county as far north as Jasper. This road will penetrate the busiest mining section in the State and put 150,000 persons in close touch with Birmingham as well as the river. The river at the Fish Trap is only 300 feet wide, and can be bridged at a cost of \$45,000 to \$65,000. The matter of an electric line from the Fish Trap into Birmingham has not taken tangible form. Altogether, the Birmingham plan is similar to that of Los Angeles, which annexed a strip 23 miles long between it and the ocean at San Pedro.

While the river at the Fish Trap is only 300 feet wide, a basin of any size desired for the turning of river craft may be easily constructed, it being the estimate of Engineer Little that \$4000 per each 100 linear feet will give the width of stream that may be deemed advisable. The minimum depth at the Fish Trap is over 8 feet, while the locks are constructed for only 6½ feet.

Speaking of the depth and width of the Warrior River, a comparison with the world's great canals has been made, with the following findings:

- Erie Canal—363 miles long, 7 to 9 feet deep, 72 locks of 18 feet width.
- Illinois and Michigan Canal—100 miles long, 6 feet deep, 60 feet wide, 17 locks of 18 feet width.
- Suez Canal—100 miles long, 31 feet deep, 108 to 420 feet wide; no locks.
- Manchester Canal—35 miles long, 26 feet deep, 120 to 230 feet wide, 3 locks, 65 feet wide.
- Kaiser Wilhelm Canal—60 miles long, 29 feet deep.
- Corinth Canal—4 miles long, 26 feet deep, 72 feet wide.

Warrior canalized river—600 miles long (including both forks), 8 to 65 feet deep, 17 locks of 52 feet width each, 300 feet to one mile wide.

The canalization of the Warrior is not regarded as a completed scheme by the Government. Early in the year orders were given Government engineers to make additional surveys on both the Locust Fork and Mulberry branches of the river, with the view of ascertaining the advisability of building additional locks at Sanders' Ferry, on the Mulberry, and just above the Fish Trap, on the Locust Fork. These surveys are now being made. The De Bardeleben Coal Co. offered to build a lock and dam at Sanders' Ferry if the Government would allow it to charge tolls for a period of years, but the Government would not consent to the toll proposition. A new lock on the Mulberry Fork would open up a vast virgin coal field.

That the railroads are casting a serious eye upon the

Warrior River as a freight carrier has been already demonstrated. While testifying in a matter of freight rates before the Public Utilities Commission at Montgomery this spring, E. A. de Funiak, general agent of the Louisville & Nashville Railroad at that place, said: "There has never been a doubt in the minds of the railroad officials that sooner or later we would have to compete with the river transportation." Mr. de Funiak then went on to say that the Louisville & Nashville, looking to this end, had already projected a short line to Mobile via Helena and Selma in order to meet this competition.

Soon after the river was opened to navigation the Frisco system made a drastic reduction in its freight rate from coal mines in Walker county to the river to facilitate river shipments via the piers at Cordova. Other railroad interests intervened and the lower rate was withdrawn.

However, the position of many railroad men is that the Warrior River will not injure railroad traffic, but, on the contrary, take care of heavy freights and leave the higher class for them. Gen. W. M. Black, chief of engineers of the War Department, who was recently in Alabama, held to this view and incidentally mentioned that some time ago, when he went to see the president of the Pennsylvania system about matters regarding a canal from Delaware to New York, which would parallel the double tracks of the railroad, the president said: "I will be glad to help the canal along in every way I can. If the canal is built, it will be a help to us in certain ways. For instance, there is much heavy tonnage which we handle at little or no profit. The canal could handle that profitably, while we could put our attention to the more profitable freight."

One of the outcomes of the development of the Warrior, in which the citizens of the Bessemer district are much interested, is the proposed Bessemer or Valley River Canal. Fifteen years ago, before Lock 17 was built, United States Engineer Ripley made a survey of Valley River, which empties into the Warrior six miles north of Lock 17, from its mouth to the city of Bessemer. His report was that the river could be canalized and navigable water brought to the city limits of Bessemer at a cost of \$4,000,000. Years went by with nothing done beyond the rendering of this report. Recently Congressman George Huddleston succeeded in having incorporated in the Rivers and Harbors bill an appropriation for another survey of Valley River. When Lock 17 was opened water was backed up this Valley River for several miles to a navigable depth. It is now estimated that five locks of 50 to 60 feet in height would accomplish the result.

Birmingham merchants have made some initial tests of the river in a crude sort of way. Last spring the Goodall-Brown Company, wholesale dry goods merchants, had several tons of dry goods shipped by steamer from New York to Mobile, thence transferred to river craft and brought to Taylor's Ferry. There motor trucks met the boat and brought the goods to Birmingham. The freight rates to Taylor's Ferry were much under the rail rate, but, as the road to the Ferry was a mere apology for one, and there was no terminal there, rendering loading tedious and expensive, the trucking cost ate up the lower freight rates. The shipment was, however, evidence sufficient that, granted

proper terminals and haulage arrangements from the river, the river transportation route would be cheaper.

Very recently Earle Bros., wholesale merchants, who had made a connection with the firm of Holbrooks, Ltd., Birmingham, England, had a large consignment of Worcestershire sauce shipped to them via steamer to New Orleans and thence by self-propelling barge to Taylor's Ferry. Here again everything ran well until the auto trucking expense became involved. A poor road and no terminals did away with the lower cost of ocean and river transportation, but it was again ascertained that with proper haulage facilities from the river the river transportation would be preferable and at lower cost. Several months ago 700 tons of cast-iron pipe manufactured at North Birmingham were moved to the river over a railroad and there placed on self-propelling barges and moved to Plaquemines, La., much under the prevailing freight rates.

It is not a question of the ability of the river to furnish lower rates both on northbound and southbound freight. It is merely one of so harnessing the river or rather hitching to it that this ability is made available. The experience of Tuscaloosa, which is immediately upon the river and lacks only terminal facilities, in already getting goods at such lower rates that its trade territory has debouched into Birmingham's very environs is sufficient evidence of what the river holds out. Expert after expert has preached the potentialities of the river to the people of Alabama. Their \$15,000,000 water horse is ready for them. They must provide the harness by terminals on river banks, hard roads to the river and auto truck lines and freight and passenger electric lines between them and the terminals.

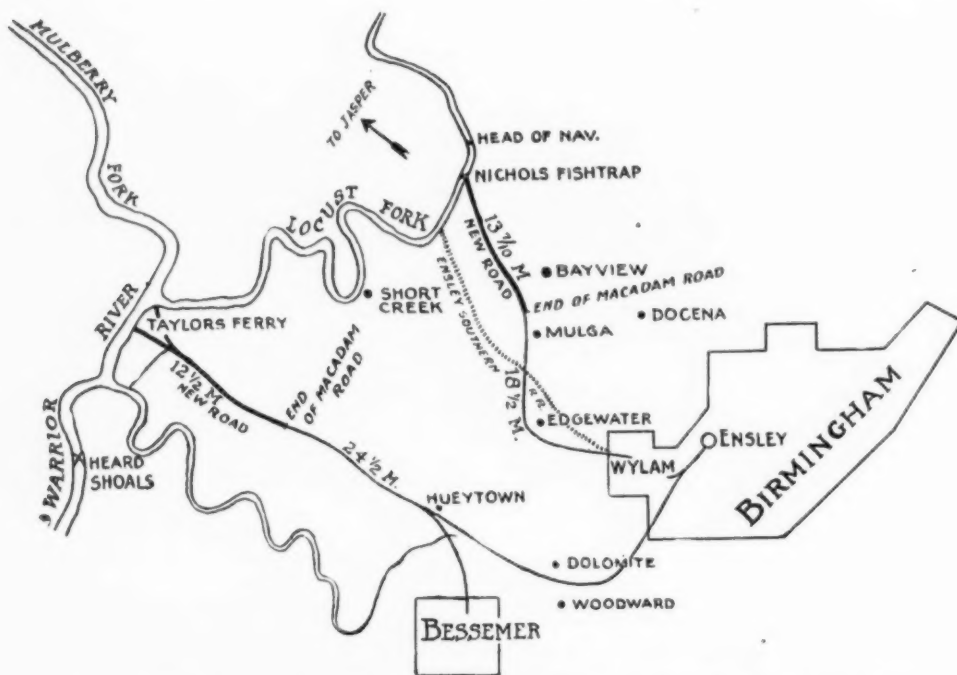
has also indicated through its officials that it is willing to make rates for local deliveries of freight at very low cost.

Absolutely no steps have been taken to develop a southbound iron traffic on the Warrior. No rates on the trunk lines, which span the river, to and from the river, have been sought. In the absence of terminals, loading devices, etc., there is no movement northward of the manganese ore which the Tennessee company imports via Mobile and Pensacola.

The Central Coal & Iron Co., which operates a furnace on the banks of the river, has made no special effort to develop a Warrior River shipping business. A reason here, as stated by a man familiar with this company's operations, is that the output of the river stack goes for the most part to the company's own pipe plants, which are not ideally situated to profit by river movements. Isolated iron movements to Mobile have taken place at much under the rail rates, and this with crude handling.

One of the leading industrial captains of the Birmingham district said, in substance: "The matter with the Warrior is that there are no strong financial interests employed in its development. Until there are, I look for no great things."

Pig-iron rates by rail to Mobile are: For domestic consumption, \$2.75; for export, \$1; for movement through the Panama Canal to the Pacific coast and Canadian points on the Pacific, \$1.75; for domestic use when transported via the Louisville & Nashville and Southern (an intrastate rate made by the Alabama Public Service Commission), \$1.75.



NEW ROAD CONSTRUCTION TO THE WARRIOR RIVER UNDERTAKEN BY BIRMINGHAM.

Shipping craft has multiplied with more rapidity than the business offered. Were the goods offered by Birmingham merchants there are river craft to get them and bring them. But the Alabama merchants have been slow about it, and they are slow yet. Geo. K. Little, Government engineer at Tuscaloosa in charge of the work in Alabama, is besieged by writers from all over the country who make inquiry about the Warrior River in its every aspect. This wonderful canal has attracted the attention of the nation's experts.

So far as the coal trade is concerned, the only present drawback appears to be in the demand. The bunker trade at Gulf ports has greatly decreased since the European war began. In normal times this is very considerable. The Pratt Consolidated has special appliances both at Mobile and New Orleans for filling bunkers direct from barges, the barges being equipped with loading devices.

The Ensley Southern Railroad belongs to the Southern Railway. Overtures have been made for the leasing of trackage rights on that road by the city of Birmingham, and this proffer has been met more than halfway. It is possible that some such arrangement will be made. The Birmingham Railway, Light & Power Co., which owns the Birmingham Belt Line,

Pig-iron rates to New Orleans are: For domestic consumption, \$2.65; for export, \$1.40.

Movements by barge lines with proper loading devices, etc., ought not to exceed the Mobile export rate of \$1 per ton.

Altogether the Warrior River, while it is the longest and in some respects the largest canal in the world, is as yet more of a potentiality than a commercial reality. It is like a sleeping giant just beginning to open its eyes. Or, rather the people of Alabama, prodded by the expert opinion of the nation frequently rendered to them, have begun to rub their eyes and wake to a realization of the immensity of this nation's gift to them.

While Alabamians generally have been slow to appreciate the value of the canalized Warrior, sufficient interest was created soon after Lock 17 was opened to establish a sentiment for the development of the port of Mobile. To this end the last Legislature created the State Harbor Board, of which George Gordon Crawford, president of the Tennessee Coal, Iron & Railroad Co., is a member. Unfortunately, financial provision for the operation of this board was not adequately made. However, the city of Mobile employed Ford, Bacon & Davis, engineers, to make a compre-

hensive study of Mobile harbor and suggest improvements. This firm has just completed its work, and a report embodying every phase of possible development, with maps, shipping data, etc., has been recently submitted. Following this report, the State Harbor Board and the City Commission of Mobile held a conference, and at that conference it was agreed that the city would relinquish its right and title to the islands in Mobile Bay if the State Harbor Board would undertake their utilization, and that the city would take care of the interest on bonds issued for the building of docks and wharves on these islands. These islands, better known as the Sand lands, are capable of conversion into any amount of wharf front, slips, etc. Being public property, the docks and wharves to be built along them would be for public use.

This agreement between the Harbor Board and the city of Mobile marks the first joint action of State and city for the development of the port, and the very best results are expected to follow.

Meanwhile, individual firms and business men of Mobile and other parts of Alabama had taken steps for port development in no inconsiderable degree. The recent consolidation of the Henderson Iron Works, the Gulf Drydocks and the Ollinger-Bruce Drydocks companies, creates a ship repairing and shipbuilding firm of importance. Several million dollars have been invested by Mobilians and other Alabamians in river and ocean craft intended to ply out of the port of Mobile.

The Magnolia Compress Co. has added conspicuously to Mobile's ability to handle and ship cotton through its superb system of terminals, warehouses, etc.

Now that the city and State of Alabama have come together officially for Mobile's port development, the canalization of the Warrior River may be said to have begun to receive its finishing touches.

Manganese Deposits in Virginia and Maryland.

The great demand for manganese ores and the high prevailing prices lend additional interest to a recent report on some manganese mines in Virginia and Maryland, by D. F. Hewett of the United States Geological Survey. The demand for large amounts of manganese ores in this country began in the period of 1865-1870, with the introduction of the Bessemer and open-hearth processes of steel-making, and has grown enormously. The domestic supplies have furnished only a small fraction of the manganese required by our industries—in 1915 only about 3 per cent., and from 1910 to 1914 only 1 per cent.

Virginia has contributed more heavily than any other State to the domestic production. Five of the six deposits described in this report are on the east side of the valley that lies west of the Blue Ridge and is commonly known as the Great Valley of Virginia. They coincide roughly in position with the outcroppings of a group of Cambrian shales and quartzites. The other deposit lies well east of the Blue Ridge, in the Piedmont region. Psilomelane is the commonest manganese mineral of all the ores, but manganite and wad are also present. The ores are all of near-surface origin, and were formed mainly through the replacement of clays and schist by manganese carried in solution in the ground water. Some of the clays replaced were the residual products of rock weathering, others were deposited in ancient stream channels, and still others were formed through the crushing of wall rocks along zones of fracturing. The greatest depth to which the ores have been traced is 260 feet.

Many manganese deposits in other regions are the result of present-day processes of oxidation and deposition through the agency of air and surface waters, but Mr. Hewett believes that the Virginia deposits were formed long ago, in Tertiary time, and furthermore that the manganese oxides were in part deposited below the permanent ground-water level, their formation resembling in this particular the deposition of certain of the Lake Superior iron ores. He considers it improbable that manganese ores in any of the Virginia or Maryland deposits will extend to depths of more than 500 feet.

\$145,382 Street Paving Contracts.

Three contracts totaling \$145,382 for street paving have been awarded by the city officials of Baltimore. These contracts provide for continuing the extensive street improvements which have been in progress.

Utilizing Waste Forest Products in Amazing Variety and Extent

UNITED STATES LEADS THE WORLD IN SYSTEMATIC EFFORTS OF THE
KIND—OUTLINE OF THE WORK ACCOMPLISHED AND UNDER WAY
AT THE FOREST PRODUCTS LABORATORY AT MADISON, WIS.

[Special Correspondence Manufacturers Record.]

Madison, Wis., July 20.

In an interview with Frank J. Hallauer, in charge of the Section of Review, Forest Products Laboratory, Madison, some exceedingly interesting statements were made as to the utilization of wood wastes which has been worked out at the laboratory, and the great value of the experimental and research work which is under way and in prospect. Mr. Hallauer said:

"Much amazement has been shown at what Germany is doing in obtaining from the forests products she can no longer obtain from other sources. These products include articles necessary for feeding and clothing the people, in safeguarding public health, and most of all, hospital supplies and ammunition for carrying on the war. It is difficult for most people to realize that forest products cover such a wide field. Recent developments have taught us to appreciate in a new way the importance of forest resources, and it will probably be a surprise to learn that no country with the exception of Germany has made such a systematic effort at developing these resources as has the United States.

"The Forest Products Laboratory at Madison, Wis., was the first of its kind in the world. It was established in 1910 by the Forest Service of the United States Department of Agriculture in co-operation with the University of Wisconsin.

"The problems of the laboratory are chiefly industrial, and for that reason its accomplishments are more likely to be known to people in the industries affected than to the general public, which is only indirectly, but just as vitally concerned.

"In speaking of forest products or wood-using industries it is natural to think first of the lumber industry and its allies, or those industries which use wood in a mechanical sense. Only about one-third of the tree cut for lumber actually gets into the finished product, and what may be considered waste in the lumber industry is more than sufficient, though not always of the best, to supply raw material for all other forest products industries, such as the pulp industry and distillation industries.

"Our forest products industries are among our largest industries, employing over a million wage-earners, and second only to agriculture in that respect. So that whatever can be done in the way of conservative utilization of the forests is not only protecting a large natural resource, but directly concerns the welfare of 10 per cent. of our wage-earners as well. This conservative utilization requires the manufacture of a greater diversity of products and development of uses or markets for such products.

"Charcoal is used in the manufacture of black powders, and, regardless of the enormous consumption of smokeless powders, there is still a big demand for gunpowder. It is used in driving bullets from shrapnel, because only a moderately powerful explosive is required, and the smoke produced when the shells break is of great assistance in determining the correct range.

"The successful use of nitrocellulose powders depends upon a solvent which will properly gelatinize the nitrated fibers. All the acetone employed as a solvent is made from acetic acid, which, together with methyl alcohol, are two important products of hardwood distillation. Great Britain in producing her cordite is dependent upon the United States for her acetone.

"Black walnut has been the standard gunstock, and the demand has so nearly exhausted our supply that other woods, notably birch, are being substituted.

"There is also complaint of a shortage of willow for wooden legs.

"The Japanese are supposed to be furnishing paper clothing to the Russians, and the Germans are using an artificial cotton made from wood as an absorbent in surgical work.

"Disinfectants have certainly found their place in the sun as necessities of life, at least human life as

against some other forms of life, and it is worth while to point out that pure wood alcohol is the only substance which can be converted on a commercial scale into formaldehyde, which is used universally for disinfection against such contagious diseases as smallpox, scarlet fever, diphtheria and tuberculosis. It is also used to prevent crop diseases by disinfecting the seeds.

"So much publicity on the developments of various phases of the war makes it easy to understand the importance of our forests as a source of war supplies, although it in no way compares with their importance as a source of raw materials for our industries, and there can be no better time than the present to carry the point home.

"The early practice of leaching wood ashes as a part

of the home soapmaking has disappeared, but it is now being revived as a source of potash to offset the shortage of fertilizer due to the war.

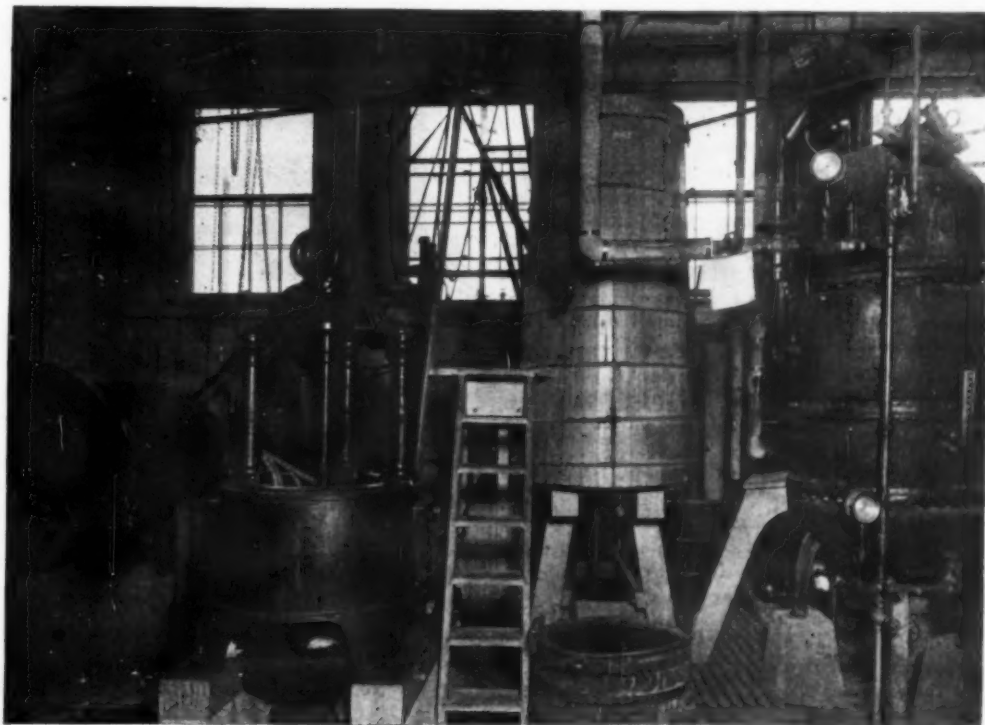
"In the Red River Valley of Texas the Indians long ago used osage orange for dyeing, but it has never gained commercial recognition as a dyewood. Within the last year, however, the Forest Products Laboratory has succeeded in getting it into the market as a substitute for fustic which we import from Jamaica and Tehautepec, and over a million dollars worth of this dye is now being made by our American manufacturers, and this from mill waste.

"The needles or leaves of the coniferous trees have little ducts running through them filled with oil. This oil from a number of species has a very attractive odor and is used in greases and shoe blackings. In Europe the finer needle oils are used as perfumes in soaps. Some are used as inhalations for lung diseases and as additions to baths and ointments in rheumatic afflictions. An analysis of the leaf oils of our leading conifers has just been completed by the laboratory.

"A chemical analysis is being made of all our native woods. While making the analysis of western larch it was noticed that there was an unusually high percentage of water-soluble material. This was found to be "galactan." Now, if this material can be converted into a fermentable sugar, which seems probable, western larch



LABORATORY AND STORAGE YARD. LOGS ON SKIDS TO BE USED FOR EXPERIMENTAL WORK. EXPERIMENTAL TIES FURNISHED BY THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY TO BE TREATED BY THE LABORATORY AND THEN PLACED IN AN EXPERIMENTAL TRACK ON THE RAILWAY COMPANY'S RIGHT OF WAY.



DISTILLATION LABORATORY, SHOWING ETHYL (GRAIN) ALCOHOL APPARATUS.

would have a considerable advantage over other woods as a raw material for grain alcohol.

"The laboratory has been working on the production of grain alcohol from wood for over five years and has been successful in experimental work in raising the yield and lowering the cost of production to such a point that its entry into the motor fuel market no longer seems an impossibility, particularly with gasoline going up as it has. The process requires finely divided wood, so that it is especially interesting as a means of utilizing the enormous quantity of sawdust and other mill waste.

"The extraction of rosin from fat wood has not been particularly successful because of the excessive loss of solvent and because the rosin is only medium grade. The wood is chipped before it is extracted, and these chips after extraction were practically a waste. Experiments at the laboratory have shown that if the chips are made of proper size they can first be put through the extraction process as before and then converted into pulp.

"Converting the cellulose into a gelatinous material known as viscose opens up still another field of research for the utilization of wood waste and adding a new line of products running all the way from sausage casings to tapestry. We have quite an interesting exhibit of such products. Many of the silk socks, neckties and fancy braids now on the market contain silk made from wood. Probably in time to come the whims of the silkworm will have little control over the silk market conditions.

"The kraft paper situation has been one of the most interesting commercially as well as experimentally, and especially concerns the South. The process of manufacturing sulphate pulp, from which kraft paper is made, originated some 20 years ago in Sweden and was introduced into this country about 10 years ago. Kraft differs from other papers in that it is much stronger, due to less severe action of the chemicals. It is brown, like what we usually think of as a wrapping paper. Large quantities of it are used for that purpose, and it is particularly suitable for large envelopes. It is used for book covers, for imitation leather and for cardboard suit cases, etc. Gummed strips are used in place of string for tying packages. Cut into strips, either with one side gummed and spread with a fine lint or used plain, it is run into a spinning machine and twisted into threads. This thread is then woven into such products as onion and coffee bags, matting suitcases and bags, wall covering similar to burlap, furniture resembling the reed, coarse matting, etc. For many years an attempt has been made to produce a paper twine that could replace the binder twines now made from imported fibers. The question became more active again with the recent shortage of these other fibers on account of conditions to the south of us. A successful paper substitute would provide for the utilization of a large amount of wood waste, and at the same time would build up a home industry independent of foreign raw materials. Experimental kraft made at the Forest Products Laboratory, using longleaf pine mill waste, compares favorably with the best krafts on the market.

"We should also mention a few other lines of work which have meant much to the forest products industries, although not of so much popular interest.

Over 100,000 tests have been made on commercial American timbers on which to base specifications for timber construction. Supplementing these tests, further tests on boxes and barrels have resulted in a revision of specifications of the Interstate Commerce Commission for containers for shipping explosives.

It is estimated that sap stain causes an annual loss of over \$7,000,000, which experiments have shown can be prevented.

Improved practice in the naval stores and turpentine industry has resulted in increased yields, higher grade products and the possibility of maintaining the normal output from a much smaller stand of timber. This has been chiefly an American industry, the Southeastern States furnishing the bulk of the world's supply.

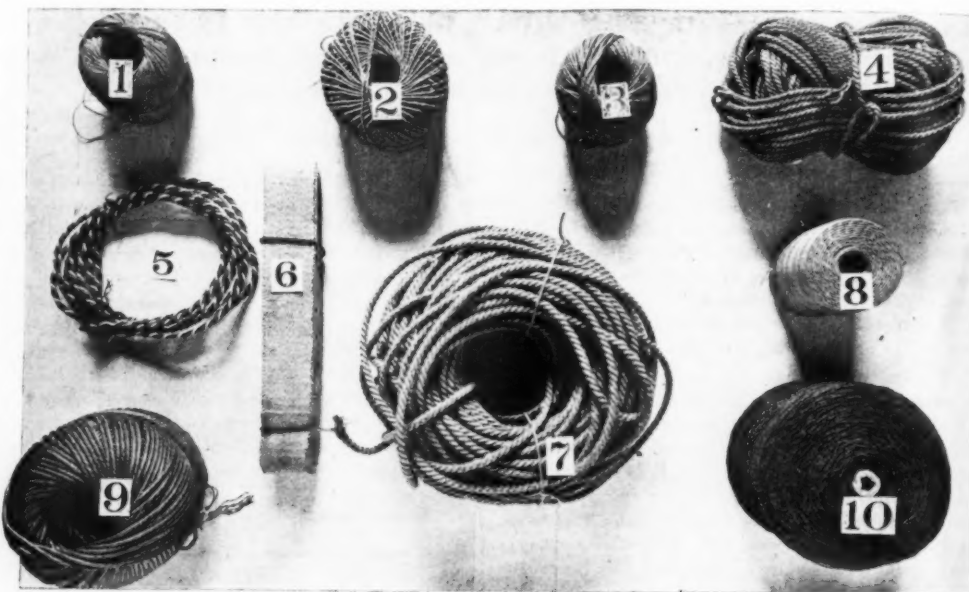
"The wood-block pavement is frequently objected to because of swelling and bleeding. By bleeding is meant the oozing of oil from the treated blocks. Means are being developed for overcoming both difficulties.

"A study of the operative features in a destructive distillation plant resulted in one case in increased yields of products to the amount of \$15,000 annually.

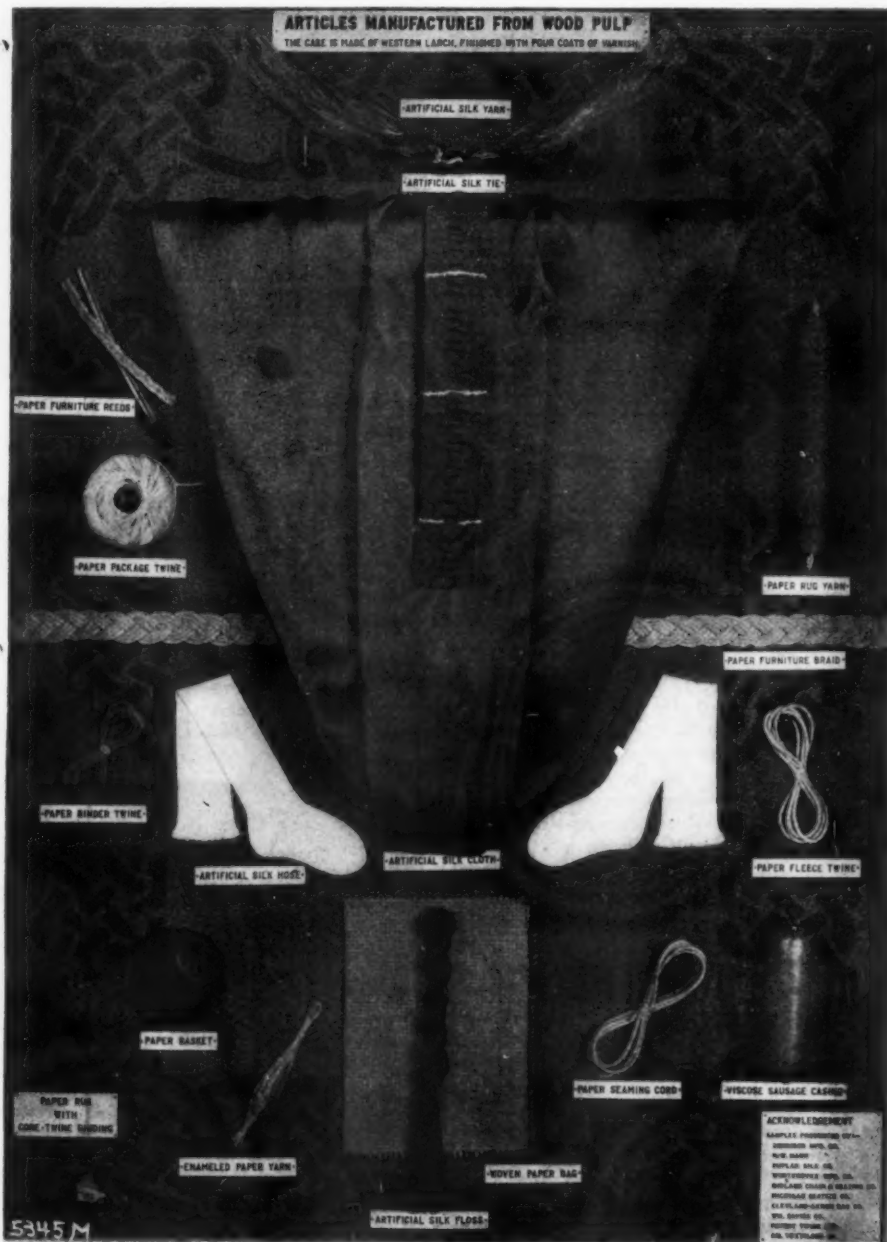
"These are only representative of what has been done in the comparatively few years that forest products investigations have been under way, and it is difficult to

suggest limitations. The per capita consumption of lumber gradually decreases with increases in population, whereas the per capita consumption of other forest products, notably paper, increases. These natural ten-

dencies are assisting the scientist in working toward complete utilization of our forest resources, which, as previously stated, means much for the economic and industrial welfare of the country."



SPUN PAPER CORDS AND ROPES.—(1) Single-strand package twine of American manufacture. (2) Single-strand package twine of Swedish manufacture. (3) Same as No. 1, medium weight. (4) Cable-laid clothesline of Swedish manufacture. (5) Variegated cable-laid skipping rope of Swedish manufacture. (6) Horse blanket webbing of Swedish manufacture. (7) Three-strand rope, suitable for driving reins, sash cord and general purposes. Swedish manufacture. (8) Same as No. 1, wound onto a tube instead of into a ball. (9) Heavy package twine, six strands, each with hemp core. American manufacture. (10) Single-strand package twine of Swedish manufacture. Similar to No. 2.



Alabama's Thrifty Colony of Single Tax Advocates

INTERESTING DEVELOPMENT ON A 4000-ACRE TRACT IN BALDWIN COUNTY — TRANSFORMATION OF A TIMBER TRACT INTO ORANGE GROVES AND PROLIFIC GARDENS.

[Special Correspondence Manufacturers Record.]

Mobile, Ala., July 28.

Aside from being the largest county in the State, Baldwin, which lies across Mobile Bay from Mobile, is distinguished in many other respects. As a whole its most notable achievement is its transformation from a vast cut-over timber tract and turpentine preserve to a rich, prolific "garden," 3642 square miles in size.

Twenty years ago Baldwin county was known to contain a greater area of standing timber than any other county in the State. Now most of the timber has been cut out and farmers from all parts of the world have

settled there. Indeed, Alabama's big county might be called Little Europe, because of the varied number of nationalities represented in its population. Plenty of cheap, rich and prolific lands and an average mild temperature the year round have not only drawn individuals from all parts of this country and almost every nation on the European continent, but they have settled in colonies as well, and they have met with success. There are German, Italian, Greek, Dutch and several religious colonies, such as Dunkards and Quakers. The most notable colony, however, is that of the Fairhope Single Tax Corporation at Fairhope, which, with its 4000 acres inhabited by farmers who are leasing from the corporation, is said to be the only such colony in the country.

The Fairhope Single Tax Corporation is indeed unique. It was organized 20 years ago by leading single tax propagandists of the country, who believed that in order to demonstrate the practicability of the single tax principle they would have to establish a community wherein such ideas would be carried out. So 4000 acres, divided in quarter sections, were bought in Baldwin county. These lands surround Fairhope, the second largest town in the county. One man, an enthusiastic single taxer of Philadelphia, gave 2200 acres to the corporation, and the rest of the acreage was bought with the subscriptions from the original organizers, who contributed \$100 each.

The creed of the single taxer is that every man should have an equal right to use the earth, which is the basis of all wealth. No man, they claim, should become rich through the enhancement of his property by artificial means; it puts an unfair burden on the shoulders of the masses.

Therefore, to remove the opportunity for land speculation, most of the 4000 acres owned by the corporation is leased by farmers for a 99-year period, for which they pay the corporation an equitable rental twice a year. The corporation, which is incorporated under the statute providing for corporations "not for pecuniary profits," out of this rental not only pays all governmental taxes, but holds the money in trust, above that paid out for taxes, to be expended for the common benefit of all, such as building roads, railroads and telephone systems. The single tax farmer's rentals are very often only just a little more than the tax he would pay ordinarily to the State. Great results in agriculture have been secured on the colony lands.

The writer was shown over the colony tract by E. B. Gaston, an officer of the corporation and one of the original settlers of Fairhope, which is the corporation's headquarters.

All along the route growing crops of almost every

variety were to be seen in the greatest abundance. The diversified crops were most in evidence, and there was some cotton, but the hundreds of acres of Satsuma orange trees were the most notable examples of the versatility and fertility of the Baldwin county soil.

The homes of the single tax farmers were, as a rule, indicative of the success that they had attained by till-



ENTRANCE TO INGLESIDE FARM, HOME OF C. T. COLEMAN, FAIRHOPE, ALA.



HARVESTING TIME AT LAKEWOOD ORCHARD, BATTLE'S WHARF, ALA.

The original Satsuma orchard of the Gulf Coast Country, Dr. H. E. Scott, proprietor. The oldest trees are sixteen years old and the youngest two years. There are 1000 trees in the orchard.



STATE-AID ROAD NEAR FAIRHOPE, ALA.



SATSUMA ORANGE TREE AT BATTLE'S WHARF, WHICH BORE 1163 ORANGES AT SIX YEARS OF AGE, AND HAS HAD A GOOD CROP EVERY YEAR SINCE.



HORNING TRUCK FARM, FAIRHOPE, ALA.



A FAIRVIEW SATSUMA ORANGE TREE IN FRUIT.

ing the rich soil with intelligence and the use of modern implements. Substantial, well-kept cottages, most of them were, surrounded by grape arbors, orange trees and flowers, but here and there a more pretentious home was to be found.

Good roads are being built throughout the county. This work, on the part of the town, county and colony officials, was begun within the last few years. The Old Spanish Trail, one of the chief highways of the county, is being graded and put into good shape along the whole route through the county.

A railroad is projected from Fairhope to Roberts-dale, where a connection with the Louisville & Nashville Railroad can be effected. At present the line has been completed only from the wharf, on the bay, to the center of Fairhope, a distance over a mile, and the rolling stock is propelled by an automobile engine adjusted for running on rails. The colonists propose to build the road through the colony land and on to Roberts-dale. They expect to build it within the next year, and this will give Fairhope its only connection with the outside world by rail.

Baldwin county is noted for its production of Satsuma oranges. The Gulf Coast Citrus Fruit Exchange was organized last year, with headquarters in Mobile, to embrace the counties of Baldwin and Mobile. During the last season 16 cars were shipped through the exchange from the two counties. Due to exceptionally good crop that is expected this year, the increase in the membership of the organization and the thousands of additional trees that will mature this year, an officer of the exchange stated that he expected the exchange to ship for its members at least 100 cars this season.

The first Satsuma oranges to be grown on the Gulf coast were on trees set out in 1898 at Battles Wharf, Baldwin county, Alabama, by Samuel White, a wholesale merchant of Boston, who at the time was in the South for his health. The following year the 700 trees set out by him were frozen, but he was not discouraged, and he tried it again the following season. This time he was successful. Not only was he successful in demonstrating that these delicious oranges could be grown on the Gulf coast, but his sojourn in the balmy climate brought him back his health and the gratifying knowledge that he had started an industry which, he believed, would some day bring millions to the people of that section. It has. The original orchard is now owned by Dr. H. E. Scott of Battles Wharf, and it is one of the most prolific in the county. There are 1000 trees in the orchard, the oldest being 16 and the youngest two years old.

Soft-shell pecans are another important crop in Baldwin county, second in importance only to the Satsuma.

The cultivation of figs on a commercial basis is being tried out this year for the first time in the county. The Cudahys, of meat-packing fame, Chicago, own land near Roberts-dale on which they have planted 80 acres in figs as an experiment.

Baldwin is an agricultural county, and its importance as such is indicated by the rapid growth and progressiveness of the Baldwin County Agricultural Society. If this society has accomplished nothing else worth while—which it has—it has given to the world its slogan, originated by Prof. Paul C. Bodonsque, county engineer, to this striking effect:

"The rugged hand of agriculture upholds the world."
ROY G. BOOKER.

Woolen Cloth, Toilet Articles, Etc.

Luigi Dacco, Avenue Jules Cantini 14, Milan, Italy: "For the immediate present I am in earnest to make inquiry for all kinds of textiles, particularly wool cloths and linings; hooks and eyes, dress buttons, safety pins, hairpins, toilet pins, needles, snap fasteners, sewing machines. Any proposal for these articles shall have my best attention. My bank in Italy is the Credito Italiano, Milan, and in America Guaranty Trust Co., New York. Apply to them for references on my firm."

The Henry River (N. C.) Manufacturing Co. will reconstruct its cotton-yarn mill recently damaged by flood; three-story 150x75-foot standard mill construction building costing \$60,000; 8000 producing spindles and accompanying machinery costing \$115,000, including \$30,000 water-power plant with rope drive.

To Make Many Patents Available to the Public

PURPOSE AND SCOPE OF THE RESEARCH CORPORATION.

[Special Correspondence Manufacturers Record.]

Washington, D. C., July 29.

In the United States, where the individual efforts of scientists are more marked than in any other country in the world, there has been a lack of co-ordination which has caused the nation as a whole to lag behind in national scientific development. During the last few years the rapid growth of engineering and technical education, coupled with a general awakening to the commercial importance of research in the industries, has brought about a persistent demand the world over for closer and more effective co-operation between the universities and technical schools on the one hand and the actual industrial plants on the other.

The Research Corporation was incorporated in February, 1912, at the direct instance of Dr. F. G. Cottrell, chief metallurgist of the Bureau of Mines, with headquarters at 63 Wall street, New York. Briefly stated, it is a board of administration, whose work is to guide the development of such patents as may be turned over to it, and finally market them, the net profits from all such business being devoted to scientific research "by contributing the net earnings of the corporation to the Smithsonian Institution and such other scientific and educational institutions and societies as the board of directors may from time to time select, in order to enable such institutions and societies to conduct such investigations, research and experimentation." Under this system, it will be noticed, a part, at least, of the financial returns of the scientific investigations of our academic laboratories automatically goes back to them for aiding further investigations.

But this represents only one side of the good which the plan aims to accomplish. The men in our universities and colleges have been among the first and most effective in promoting the general conservation movement, yet there is what may be termed an intellectual by-product of immense importance, a product of their own activities still largely going to waste. This is the mass of scientific facts and principles developed in the course of investigation and instruction which, through lack of necessary commercial guidance and supervision, never, or only after unnecessary delay, reaches the public at large in the form of useful inventions, and then often through such channels that the original discoverers are quite forgotten.

The Research Corporation was primarily intended to serve the ever-growing number of men in academic positions who from time to time in connection with their regular work evolve useful and patentable inventions, and without looking personally for any financial reward would gladly see these further developed for the public good, but are disinclined either to undertake such development themselves or to place the control in the hands of any private interest.

During the process of organization, however, it became evident that the class of donors of patents to the cause would by no means be limited to men in academic positions, but rapidly extended not only to private individuals outside the colleges, but even to large business corporations who often find themselves incidentally developing patents which overrun their own field of activities. Such patents are very apt to get pigeon-holed and come to actually stand in the way of true industrial progress, even though their owners may realize that development and use by others would indirectly benefit themselves. As an official of one of the large electrical companies put it, "any extension of the use of electricity, or even power in general, is pretty sure eventually to mean more business for us through one department or another."

A procedure adopted in academic and public positions by many men in an attempt to bring various inventions before the public and at the same time prevent private monopoly has been to secure patents as matter of record and then throw them open gratis to public use. This procedure received official recognition in the United States Patent Act of March 3, 1883, which authorizes the remission of all Patent Office fees to Government officials on patents bearing on their face permission for

everyone in the country to use the invention without the payment of any royalty.

Practice has shown, however, that this does not accomplish all that had been hoped for it. A certain minimum amount of protection is usually felt necessary by any manufacturing concern before it will invest in the machinery or other equipment, to say nothing of the advertising necessary to put a new invention on the market. Thus a number of meritorious patents given to the public absolutely freely by their inventors have never come upon the market chiefly because "what is everybody's business is nobody's business."

If some of these patents, on the other hand, were placed in the hands of such an organization as the Research Corporation, it could study the situation and arrange licenses under fair terms, so as to justify individual manufacturers in undertaking the introduction of the inventions and at the same time would be accumulating from the royalties funds for further investigations.

The terms under which each new patent shall be acquired by the corporation are entirely in the hands of the board of directors, but at least for some time to come it is probable that only such patent rights will be primarily considered as are offered freely without restrictions as to mode of administration or obligation of any financial return from the corporation, as present indications are that the latter will find itself well occupied even by these offers alone.

A much simpler and expedient procedure appears to be for the patentee to retain if he so chooses complete title and control of his patent in certain geographical territory while assigning the same in other territory entirely unencumbered to the corporation. Any development which the latter can give it will then automatically enhance the value to both.

By the time the work of the corporation had reached a self-supporting basis its significance was felt to have broadened to a degree which made its control by a local institution such as a single university inexpedient, as the fullest success of such a movement is inevitably conditioned upon its being most broadly representative of the common interests of those whose co-operation and support it aspires to secure. Through Director J. A. Holmes of the United States Bureau of Mines, who had taken a very helpful interest in the work, it was brought to the attention of the Smithsonian Institution nearly two years ago, the informal discussion which followed resulting in a formal offer of the patent rights to the institution. The only condition qualifying this offer was that these patent rights should be given an adequate business administration and the proceeds be devoted to furthering scientific research.

After careful consideration and discussion with the prospective donors and under their hearty endorsement, the Board of Regents of the Smithsonian Institution decided that the institution would accept a declaration of trust from the owners of the patents to hold and operate the same in the interests of the institution, and to pay over to the said institution the net profits therefrom. The Smithsonian Institution further authorized its executive committee and its secretary, Dr. Charles D. Walcott, to co-operate with those from whom the offer had come in the organization of either a subsidiary or an independent board of trustees or directors to conduct the business side of the project. It will then devolve upon the board of directors to decide upon a definite policy for the ultimate control of the corporation. This may be done by turning the entire stock of the corporation over to the Smithsonian Institution or by dividing it among a number of universities and similar institutions. Such a course would not give to the particular institutions so selected any more direct claim on the profits of the corporation than others, since stock is non-dividend-bearing, but merely constitutes them as trustees responsible for the election of directors to give the corporation a business administration, thoroughly practical but conforming to the ideal implied by its objects and associations.

Merely as an index to the practical significance

which the work has already attained, suffice it to say that installations made under patents on a process of electrostatic collection of smoke and fumes from metallurgical and chemical plants, invented by Dr. Cottrell, have now been in commercial operation for over five years, and the largest of these have been on a scale representing a construction cost of over \$100,000 each. The first were in the far West, but several are now in operation or under construction in and about New York city.

An installation of this kind that has attracted considerable attention is the by-product plant installed at the plant of the Security Cement Co., Hagerstown, Md., for precipitating cement dust, from which potash is being recovered, as recently described in the MANUFACTURERS RECORD.

Southern Industrial Activities.

Since January 1, 1916, the Construction Department of the MANUFACTURERS RECORD has published 36,090 items relative to general industrial developments, railroad and financial operations, erection of buildings, etc., in the South and Southwest, 4354 of these having appeared in the Daily Bulletin and the MANUFACTURERS RECORD during July. Items for the previous six months were detailed in respective monthly statements. Under their appropriate headings, the items for July are shown in the following table:

Industrial and Developmental.	
Bridges, Culverts and Viaducts.....	67
Canning and Packing Plants.....	11
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Electric Plants.....	3
Fertilizer Factories.....	7
Flour, Feed and Meal Mills.....	17
Foundry and Machine Plants.....	101
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Hydro-electric Plants.....	24
Ice and Cold-storage Plants.....	4
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Land Developments.....	4
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Dwellings.....	24
Government and State.....	356
Hospitals, Sanitariums, etc.....	281
Hotels.....	22
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Railway Stations, Sheds, etc.....	83
Schools.....	8
Stores.....	
Theaters.....	
Warehouses.....	
Railroad Construction.	
Hallways.....	
Street Railways.....	
Financial.	
Corporations.....	87
New Securities.....	472
Fire Damage, etc.....	3,707
Machinery, Proposals, Supplies Wanted.....	123
Total for July.....	4,354
Previously detailed since January 1.....	31,736
Total for seven months.....	36,090

Negro Farmers Said to Be Leaving South to Work in Northern Coal Mines.

Negroes from Southern farms are beginning to migrate in rather large numbers to the coal mines of West Virginia to take the place of Italian and Serbian miners who have been called to the colors, according to statements made by newspaper correspondents. An instance is given where 400 negroes from Virginia farms have gone to one West Virginia mine alone in the past 18 months, the war having practically cleared the entire camp of the former European miners.

As the negro miners are said to receive \$3 to \$4 a day, as against \$1 or \$1.25 when working on the farm, it is intimated that Southern farmers may be confronted with a labor problem if present tendencies should continue.

GREAT CONSTRUCTIVE EFFORT

Occasioned by Flood in Western Carolina.

[Staff Correspondence Manufacturers Record.]

Charlotte, N. C., July 30.

That the recent flood that swept down through the Catawba River Valley, in North Carolina, eclipsing all previous hi-h-water marks by altitudes ranging from 15 to 20 feet, will effect revolutionary changes in the plans of the Southern Power Co. engineers regarding not only established plants, but those in contemplation, is a fact that has just transpired here following conferences between James B. Duke, the multi-millionaire tobacco magnate, and W. S. Lee, vice-president and executive head, and the engineering staff of this big hydro-electric corporation.

The recent floods did not move a yard of masonry in any of the dams across either the Catawba or the Broad rivers, but each and every power-house along the two rivers was flooded and operations were abandoned by reason of flooded generators and deluged stations. The damage occasioned by the high waters has been estimated as high as \$1,000,000 to this one corporation alone.

The standards on which the estimates for all these dams and power-houses were designed extended back 100 years, and in several cases even to pre-Revolutionary days. The highest water records were taken as the minimum and the work was built on this basis. But this has proved to be too low a standard, as the Southern Power engineers have found to their great sorrow, and the new calculation is being made on the July, 1916, flood as the minimum.

The result is going to be that all the present stations are to be reinforced and lifted as much as engineering practice will permit in order that they may be above the level of any succeeding flood. This is not to be done today nor tomorrow, but is to be achieved gradually. One plant is to be worked over and then another until all conform to the elevated standard established by the late flood. This will probably require several years.

All future plants are to be designed with this in view, and nothing is to be allowed to go into the river that does not accord with this plan.

This will result in the expenditure of millions additional, but it will place the hydro-electric interests of this section beyond the reach of any floods that may come. It will add to the initial outlay required for waterproof installation, which, of course, will mean that the consumers will have to carry the augmented load.

Mr. Duke is here for the purpose of adjusting the plans to the new standards. When the Southern Power Co. was compelled to annul service to more than 1,250,000 spindles in cotton mills on secondary power contracts—as was the case during the recent flood—that was a situation that touched the pride of the officials and also that of Mr. Duke and hence the elaborate plans under way.

The Southern Power Co. has five big hydro-electric power stations on the Catawba River and one on the Broad at Ninety-nine Islands, generating on these two streams alone approximately 165,000 horse-power.

Extensive Development of West Arkansas Gas Field.

Little Rock, Ark., July 29—[Special.]—The Kibler gas field, in Western Arkansas, discovered less than a year ago, has encouraged numerous industrial activities, chief among which is the location at Van Buren of the first zinc smelting plant of the State. Since October, 1915, when the first well was brought in, hundreds of thousands of dollars have been spent in development work and in transporting gas to the mills and factories of Fort Smith, Van Buren and neighboring towns. Many new industries have been located and franchises have been granted in a number of towns for supplying gas for domestic and industrial consumption. The Fort Smith water-works plant is getting five-cent fuel, and domestic consumers are signing contracts for 15-cent gas, where they have been paying 50 cents. All this has been done in 10 months, and indications are that the field is only at the beginning of its development.

There are 13 producing wells in the district, with a total daily production of 141,950,000 cubic feet.

BIG AND UNIQUE HYDRO-ELECTRIC WORK IN CAROLINA.

Indemnity Policy of from \$1,500,000 to \$2,000,000.

[Staff Correspondence Manufacturers Record.]

Charlotte, N. C., August 1.

The Hardaway Contracting Co. and the Rinehard-Dennis Co., the former of Columbus, Ga., and the latter of Charlottesville, Va., to whom were awarded the contract recently for the construction of three immense dams—one across the Catawba River, another across Paddy Creek and a third across Linville River—for the Western Carolina Power Co., a subsidiary of the Southern Power Co., in Burke county, N. C., have just entered into a contract with the Maryland Casualty Co. of Baltimore, Md., for a blanket policy aggregating between \$1,500,000 and \$2,000,000 to cover any liability arising by reason of injury to any of their employees on this immense work. The policy, one of the largest of the year, was written by the American Trust Co. of Charlotte, general agents in North and South Carolina for this well-known Maryland concern.

This development in Burke county, N. C., is unique in hydro-electric development in the South in that it is designed primarily for the storage of water which will be used in times of limited stream flow during the hot summer months to augment the load at the five big hydro-electric plants operated by the Southern Power Co. farther down the river at Lookout Shoals, 32,000 horse-power; Catawba, 10,000; Fishing Creek, 40,000; Great Falls, 32,000, and Rocky Creek, 32,000.

The power itself will generate 26,000 horse-power, and will be known as Bridgewater. Construction work will begin with the next week and the station is to be completed by January 1, 1918.

Nashville Commercial Interests Unite for Team Work.

Nashville, Tenn., July 26—[Special.]—A. B. Foster has resigned as secretary of the Industrial Bureau, and his successor will be selected in a day or two. The Industrial Bureau is no longer separate, but has become a department of the Commercial Club. The move was started four or five months ago and consummated within the last 10 days. The Commercial Club is remodeling the Vanderbilt Building on Fourth avenue North and adding a story to it to make a real clubhouse as permanent headquarters, and the intention is to have a gymnasium, swimming pool and all attendant features of comfortable club life combined with commercial activity.

Several hitherto separate organizations will go into the club as departments. Among these are the Associated Retailers, the Credit Men, the Manufacturers' Association and others. The Manufacturers' Association has maintained an exhibit of Nashville manufacturers for several years in a store building on Third avenue, which exhibit will be removed to headquarters.

Here is a get-together spirit that many another town with a multiplicity of commercial organizations might well emulate. A. C. B.

\$1,000,000 and \$150,000 Packing Enterprises.

That progress is being made in the movement for establishing meat-packing plants in the South is evidenced by the organization of two Georgia enterprises, capitalized at \$1,000,000 and \$150,000, which had been proposed. The Georgia-Carolina Packing Co. is the \$1,000,000 enterprise, this being its authorized capital, which has organized with these officers: J. P. Wood, president; R. C. Berckmans, vice-president; A. G. Hackett, secretary-treasurer. No plant details have been determined. The \$150,000 enterprise is the Bulloch Packing Co., Statesboro, Ga. Brooks Simmons is president; W. G. Raines, vice-president, and D. N. Riggs, secretary.

The building will cost \$55,000, and the machinery, with daily capacity of 300 hogs, will cost \$35,000.

Contract has been awarded to the Carson Construction Co., Savannah, for the building, a four-story 119x80-foot hollow tile and concrete structure. C. L. Brooks & Co., Moultrie, Ga., are the engineers for the plant.

The Fidelity and Surety Business*

THE IMPORTANT PART THE SOUTH IS PLAYING IN THE DEVELOPMENT OF CORPORATE SURETY

The giving of the surety for the fidelity of others is of ancient origin. Until the latter part of the nineteenth century, however, sureties were composed exclusively of individuals. For the modern business community, however, personal surety has been found inadequate. There is a contingent liability assumed by those who sign the bond of a friend, which is bound to have considerable influence upon the credit of the surety, and may, in some instances, even totally impair that credit. The employer or obligee under the bond is in a position just as precarious, owing to the unreliability, in many instances, of the personal surety. Again, in cases where the person required to be bonded is an employee or official of a fraternal or beneficial order, or other organization formed for the purpose of social intercourse, and such bond is given by a fellow-member, the organization's very spirit of cordial fraternalism, which is its most valuable asset, may be destroyed, should controversy arise over the enforced collection of such personal bond of an absconding officer. Owing to these and the many other objections (and these objections affect all three parties to a bond—the principal, the surety and the obligee) encountered by the giving of personal bonds, it was only natural that there should arise a form of suretyship more suited to a commercial system which offered such a complexity of conditions and propositions requiring bonds.

As in Life, Fire, Marine and other insurance, the practice of bonding finally found its way into the corporate form of suretyship, where it has been steadily growing in this country since 1872. In that year a Canadian corporation began to write bonds on the employees of banks, railroads and corporations, generally, and while the State of New York passed an Act in 1853, authorizing the incorporation of bonding companies, it was not until twenty years later that the first company was formed. About ten years after the first, another company was organized and began extending the business by issuing bonds required by courts; and for contractors and fiduciaries. It was not until 1890, nearly forty years after New York had passed the Act authorizing the incorporation of surety companies, that the South became prominently identified with the business. In that year, the Fidelity & Deposit Company of Maryland was organized by Hon. Edwin Warfield, afterwards Governor of Maryland, and upon its entrance into the field a new departure was made in bonding public officials of all kinds, in addition to writing all the other forms written by its predecessors.

It was then possible, through this Southern company, for National, State and County or Municipal officials, employees of individuals or firms, employees or officials of corporations of any kind, contractors, fiduciaries, and all persons requiring bonds of any character to secure bonds without incurring the obligations of friends by asking them to sign personal bonds, and it enabled those who were not fortunate in having such friends to obtain positions which they might not otherwise secure because bonds were required. As a matter of fact, it was this company which first executed a bond for an official of the United States Government, as well as for officials of the various States. It was also the first company to write bonds for United States Internal Revenue officials.

Since the Fidelity & Deposit Company of Maryland began business, several other companies have been incorporated in Maryland, with their principal offices in Baltimore, which city has come to be known as the "Home of Surety Companies." Some idea of the importance of this business to the South generally, and to Baltimore especially, may be gained when it is known that these companies, with home offices in Baltimore, have representatives and employees in all the principal cities and towns in the South, and that in their home offices they employ nearly two thousand persons, and pay annually, in salaries, over \$1,500,000. The combined assets of these companies, alone, amount to over \$30,000,000, and their premium during 1915 amounted to over \$23,000,000. This premium

income was not only derived from surety business, as all these companies now write Casualty and Miscellaneous Insurance. However, \$8,390,000, or thirty-three and one-third per cent. of their total income, constituted fidelity and surety premiums, which fact clearly shows that the South has not only grown in agricultural and manufacturing, but also has had remarkable growth in this newest of insurance undertakings. In addition to the Baltimore companies, many others have been formed throughout the South, and at the present time Southern companies are doing a very large proportion of the country's surety business.

As a form of protection there is probably no other line of insurance more necessary than Fidelity Insurance, and there is probably no other line about which so little is known, or to which so little attention is paid. Other lines written by surety companies are fairly well patronized—notably, Contract, Judicial and Public Official. This, however, is due to the fact that when a man decides to build, the requirement of a guarantee from the contractor is uppermost in his mind. A contract bond settles the question. In court undertakings and for public officials, the law compels bonds to be given. But when we get down to the ordinary employee or official of a private enterprise, the question of his honesty is the last one which arises, and, unfortunately, it often arises too late.

Most men are honest. The records of the surety companies prove this; but the very fact that defalcations do occur also proves that there is a risk assumed just as great as the fire or any other hazard which employers are so careful to cover. A dishonest employee or official can in many cases do more harm to a concern than a fire. Even without fire insurance, a loss merely represents the cost of the goods, but when an employee or official defaults, the loss is usually money, and that money represents the cost plus the profit. And yet, stocks and buildings are covered by fire insurance, but cash drawers, safes and safe deposit boxes are not covered by larceny and embezzlement insurance. It is the same old "law of average." It brought about the insurance guilds of the Middle Ages, members of which guilds made regular contributions toward a common relief fund for the protection and security against loss by fire, water, robbery, death, or other calamities. Out of these was evolved the plan to turn these risks over to private individuals and later to corporations formed for that purpose.

Insurance is nothing more than a plan or device whereby the uncertain losses of the unfortunate few may be equitably borne by the many. Corporate suretyship makes this plan possible, and the present statutory regulation and supervision of the corporations doing that class of business make it safe.

The old form of personal suretyship does nothing more than transfer the risk from the employer to some friend or other person who is willing to go on the bond. Personal suretyship does not spread the risk, which, in effect, is what is done by the surety companies, and it is for this reason that corporate suretyship has had such remarkable growth in spite of the fact that so little is known about it, or so little attention paid to it. The companies are constantly educating the employing public to the vast superiority of corporate suretyship over the old method of accepting personal bonds, and employers, generally, are more and more coming to a realization of the many advantages offered by this form of insurance to themselves, their employees, and those who are asked as a favor to sign a bond. The advantages of corporate suretyship from the standpoint of all three parties to a bond have been briefly summarized by Mr. Warfield, President of the Fidelity & Deposit Company of Maryland, under seven heads: "First: It relieves business men and persons possessing property from the necessity of saying 'no' to friends and relatives who may ask them to qualify on bonds of various kinds, which, if they did, would create a contingent liability, impair their financial credit and involve a possible loss. Second: It enables heirs and next of kin to become trustees, executors, and administrators of the estates of their deceased relatives, and to keep the management thereof in the hands of those

most interested in a speedy, cheap, and proper settlement. Third: It relieves those required to give bonds from incurring obligations by asking friends to become surety for them, and which they would feel bound to reciprocate when the opportunity offered. Fourth: It removes all liability or excuse for undue influence being exercised over bank officers, railroad employees, and public officials, by those becoming surety for such officials. Fifth: It insures a supervision over the person bonded, or the estate or interest involved, that will be an incentive to right-doing and a proper accounting. Sixth: It guarantees prompt payment of losses, avoids litigation, and enables the official or employer to know the responsibility of the security furnished them. Seventh: It often enables persons who have no property or friends of financial standing to obtain positions of trust and emolument."

It has been shown that loss under a bond of personal suretyship actually entails the estate of an individual, the courts even having decided that the heirs-at-law of a personal surety are responsible for the defalcations of a friend whose honesty he guaranteed. That is the chance which the personal surety takes. On the other hand, personal sureties often pledge the same property (if they pledge any at all) on several bonds, thereby reducing the value of the security as a source of protection in each undertaking, and they just as often list or mention real estate to which they have no marketable title, or which is heavily encumbered, or the title to which is vested in their wives or other relatives. These relatives are, of course, immune to judicial proceedings seeking to make the property liable for a loss under the bond. Should the financial standing of the personal surety be beyond question, there still arises the possibility of a denial of liability, in which instance, should the case go to the courts, the employer, to his sorrow, is made acquainted with the doctrine that an individual surety is a favorite of the law, and through some technicality the surety is excused from payment.

These are all chances which the employer takes. He takes none of these risks with corporate suretyship. The assets of a surety company are always available. Its security is never lessened by bad speculation or business failures. Its reserves are under the constant scrutiny of the various State Insurance Departments, and as the doctrine above mentioned does not apply to a corporate surety for profit, because its position is that of an insurer, the terms of its contracts usually being prescribed by itself, such terms are construed most strongly in favor of the holder of the bond. As a matter of fact, reputable surety companies, like all other reputable insurance companies, do not make a practice of denying liability. They are very jealous of their reputations, and the very nature of their business is such that they could not afford to make every little technicality an excuse for the refusal to pay a loss. No further proof of this is needed than the statement contained in the Spectator, an insurance publication, that the surety companies in this country paid, during 1915, fidelity and surety losses, alone, amounting to \$7,321,783.

The banks throughout the country, more than any other class of employers, make it a rule to bond their employees with surety companies. In this connection, it is recalled that the Comptroller of the Currency of the United States Treasury recently recommended that all active officers of National Banks be required to give surety bonds. The Comptroller related a lesson from the failure of a National Bank in North Dakota. This bank had \$50,000 in capital, about \$17,000 surplus and profits, and deposits of \$400,000. It was broken from the inside. The examiner found that the defalcation of its president and cashier exceeded the entire capital and surplus.

Occurrences like these, becoming generally known in banking circles, have had a great effect in making banks protect themselves against loss resulting through the dishonesty of officials or employees. This is especially true since the courts have rendered decisions holding directors of banks liable to their stockholders for negligence. A case in point is the decision in 162 S. W., 606, to this effect: "The directors of a bank, who failed to take a bond for the faithful performance of the duties of their cashier, and negligently failed and omitted to watch and direct the business of the bank, but left it almost wholly to the cashier, whom they permitted to become indebted and liable to the bank for overdrafts, upon which he had embezzled the differ-

*By John G. Yost, superintendent of the Fidelity Development Division, Fidelity & Deposit Co. of Maryland.

ence between the drafts entered in the bank's books and the draft presented to and paid by correspondent banks, which fact might have been discovered by reasonable diligence in the examination of the bank's books, by an examination of the correspondent bank's reports, by counting the cash on hand and comparing it with the books, or by examining the accounts of depositors, are liable to the receiver of the bank for the money so embezzled."

The custom of bonding all employees is gradually extending to all lines of business. The great corporations of today all require bonds of their employees. The Government exacts bonds of nearly all its employees, and it will not be long before every employer, whether individual, firm or corporation will see the necessity of requiring bonds of all employees—not merely to guard against loss, but also for their great moral effect. In this increased business, we may confidently look to the South in its ever increasing aggressiveness, to get its full share.

Remarkable Strength of an Oklahoma City.

CLARENCE B. DOUGLAS, Secretary Chamber of Commerce, Tulsa, Okla.

Building permits for Tulsa, Okla., for July, up to noon on the 28th, total \$280,000. The total for June, 1916, was \$227,015. Including the city work, improvements in local railroad yards, the Arkansas River bridge connecting Tulsa and West Tulsa, \$250,000 Government building, \$300,000 Gallais office building, \$400,000 Exchange National Bank building, just started, and buildings costing less than \$2000, there is in this city a total building program now in course of construction and financed of more than \$5,000,000.

The bank clearings for Tulsa for the week ending July 7 were \$2,998,298, an increase of 82 per cent. over the same week in 1915. For the week ending July 13 the total was \$3,962,565, against \$1,860,000 for the same week a year ago, an increase of 115 per cent.; for week of July 20, \$3,838,086, against \$1,703,788 in 1915, an increase of 125 per cent.; for the week ending the 27th, \$4,860,682, an increase of 285 per cent. over the corresponding week in 1915.

Arrangements have been perfected for opening the ninth bank in this city, which will be the National City Bank of Tulsa, capitalized stock \$150,000. The Merchants and Planters' Bank, now operating as a State bank, will nationalize and increase its capital stock to \$1,000,000, application for charter having already been made and allowed.

A recent city directory gives a population of 54,270, based on a ratio of 2½ to each name enumerated.

Tulsa is at this time probably the fastest growing city in the United States, population considered, and for its size holds the nation's record for bank clearings and money on deposit, there having been more than \$30,000,000 in local banks at the call of June 30.

\$225,000 Feed and Grain Plant.

All contracts have been awarded for the feed and grain plant which John T. Gibbons will build at New Orleans. About \$225,000 will be the cost of this plant, and its daily capacity will include 200 tons of mixed stock feed, with 50 tons of poultry feed. The feed mill will be five stories high, 145x50 feet; the grain elevator 140x75 feet, with a capacity of 250,000 bushels, and the grain storage warehouse three stories high, 140x125 feet, all of reinforced concrete construction, with steel doors and windows. Individual electric motor drives will be installed for all the equipment and grain-handling machinery, the electricity to be obtained from the New Orleans Railways Co.

Julius Koch is the general contractor, and E. R. Bartholomew is the superintendent, both of New Orleans. Kaucher, Hodges & Co. of Memphis are furnishing and installing all the equipment. Sam Stone, Jr., New Orleans, is the architect. The machinery contracts have been distributed as follows: Elevator machinery and equipment, Weller Manufacturing Co. of Chicago; electric motors, Allis-Chalmers Manufacturing Co. of Milwaukee; grain scales, Fairbanks, Morse & Co., Chicago, and Richardson Scale Co., Passaic, N. J.; grain dryer, Strong-Scott Manufacturing Co. of Minneapolis; oats bleacher, Reynolds Bleacher Co. of Chicago.

The Iron, Steel and Metal Trades

COPPER MARKET CONTINUES TO DEVELOP STRENGTH.

Steel Getting Stronger—Dr. Wheeler Outlines Copper Situation.

[Special Dispatch to Manufacturers Record.]

New York, August 1.

The copper market continued to develop strength today, and there were reports that copper interests of prominence had closed contracts for sales in substantial quantities. The market was much stronger for electrolytic, which advanced to 26½ to 27 cents, although Lake remains unchanged at 26 cents. Commenting on the copper situation today, Dr. Schuyler Wheeler, president of the Crocker-Wheeler Company, which is a large consumer of copper, said that he did not believe that the present high price of the metal would continue, but it will be a long time before it returns to its former level of 15 cents. "The situation in copper will be quite like that of the machinery trade," he said. "When the war is over a great quantity of copper will be required to restore depleted equipment, to bring stocks to normal levels and to put back much which has been stripped from various places and diverted to war purposes. We ourselves, after having bought copper from the same interest for 30 years, were formally notified some time ago that under existing conditions of unusual stress we could for the present purchase only our allotment based on past orders. As copper goes down more and more of these things will 'throw back'; that is, many articles will again be made of copper that are more difficult to get otherwise, and finally there will be a return to the use of copper in those things which can quite easily be made otherwise, and which are almost, but not quite, as good."

London cables today quoted Standard copper, spot, at £109, futures at £104 10s.; electrolytic at £125; spot tin at £167 5s., futures at £168, and Straits at £168; spot lead at £28 7s. 6d., futures at £27 5s., and spot spelter at £55, and futures at £50.

The market for finished iron and steel products is getting stronger, with indications that further large war orders are liable to be closed at any time. Although the major part of the foreign inquiries is confined to finished shells and shell parts, it is said that virtually all the unfinished steel offered, in whatever form, is promptly absorbed in export purchases and with little negotiation as to price. Prices are as firm as ever, and, indeed, the market for most products is becoming stronger and stronger. This is especially true of billets and plates. It has become generally understood that the principal restriction to new business is the amount of vessel capacity available and the ability of the mills to make deliveries.

EXPORT DEMAND FOR BILLETS AND BARS.

Munition Makers Coming Into Steel Market—Pig-Iron Market Becoming More Active—Prices Being Well Maintained.

New York, July 31.—[Special.]—The demand for steel products, as reported last week, continues to be as vigorous as ever, but the most activity is being shown for forging billets and shell bars. Foreign governments have increased their demands for these articles, while some domestic consumers are making strenuous efforts to purchase round lots without much success. In some circles opinions are expressed that if the demand for these products continues, higher prices may be expected shortly. American railroads are showing symptoms of placing large orders for equipment in the near future, but thus far inquiries received from this source by equipment manufacturers have been rather light in volume. Delayed deliveries and higher prices evidently are holding back new buying.

Munition manufacturers in this country, who have been taking additional orders, are expected to come into the steel market as purchasers to fill their requirements in advance and be protected on their orders. In fact, quite a good deal of this business is already commencing to make its appearance. While it is admitted that actual war orders from abroad from this time on are

likely not to be as large as those which have gone before, the steel producers believe the increased production of the munition plants of the Entente will be reflected in raw purchases in this country.

It is now becoming evident that the reports so freely circulated recently that the "end of the war was in sight" were inspired by the Allies themselves, with the object of securing the materials that they require at lower prices than have been prevailing. The same strategy is familiar to those who follow the copper and spelter markets. It has largely failed of its purpose in the case of steel products, however, which are firm in price despite the fact that domestic demand is not as strong as it might be, due simply to the fact that consumers have given up the hope of securing materials for necessary delivery.

The United States Government, notwithstanding the assertions made that it is not buying the necessary munitions and supplies for the soldiers on the Mexican border, is now figuring prominently in a quiet way in the steel market. Close to a million projectiles for the Navy Department were recently ordered from several of the prominent producers, and it is now seeking 45-pound steel rails, joined in sections to steel ties, so as to be easily laid or moved, as well as other steel products. It is stated that the rails are for use in the event of an invasion of Mexico, which still appears to be something more than a possibility.

Orders taken by the United States Steel Corporation in July have been in excess of those received in the previous month, despite the fact that at the beginning there was a considerable falling off, but later the business developed to such an extent as to more than offset the previous drop.

Independent steel manufacturers also report good business being booked and pending. They state that even larger contracts could be taken if the deliveries desired could be given to the consumers. Rails are required in many foreign countries, and although no individual tonnage is extraordinarily large, the aggregate of all the business that is in the market is substantial.

Manufacturers of galvanized sheets are less inclined to cut prices while spelter is holding up so well. The minimum price for this grade appears to be 4.35 cents for No. 28 gauge. Business is rather quiet in black sheets, in which 3 cents is about the minimum quotation. There is a good brisk demand for blue annealed sheets, with manufacturers reporting sales at 3.25 cents, although lower prices are said to obtain in some of the Western districts.

The market for steel plates continues to show strength, and while premium sales by the smaller manufacturers are not so numerous as heretofore, prices for nearby delivery are still high.

Heavy demand is still in evidence for cold-rolled steel shafting, and one manufacturer, at least, has advanced his price for this product \$5 a ton by refusing to accept any new business at a better figure than 10 per cent. off list price, although the market is nominally quoted at 10 to 15 per cent. off for carloads. Most consumers are covered for the remainder of the year, and manufacturers are declining to deliver any 1917 contracts. Makers anticipate a still heavier demand when the hot weather subsides. Production has been cut down for the past few weeks on account of a shortage of steel bars, as the heat has reduced the output of the hot mills' material.

Pressure continues heavy for plain wire, and the leading manufacturers are limiting the proportion of this product to 10 per cent. on all jobbing orders. It is reported that specifications during the past week have been the largest for any similar period for a long time past. There is every indication of an enormous trade in this product during next fall and winter. There is a general feeling in the trade that prices of all wire material will be advanced within the next few weeks, and possibly of about \$4 a ton for the plain grade.

There has not been much activity in the steel scrap and iron markets, except some purchases by dealers of heavy melting steel, who recently discovered that good steel was not plentiful and hard to get. Rejections of scrap shipments are quite numerous, as purchasing agents at the mills are very particular as to the kind of material that they accept. Heavy melting steels, therefore, holding up well in spite of the absence of any

new buying. There have been no notable changes in the prices of any scrap material during the week, and it is expected that the market will remain in its present dull state for another month or so.

The market for pig-iron is developing some new characteristics, the technical position of which is strong. The outstanding feature of the situation is the continued demand for Bessemer and low phosphorus iron for export. Shipments promise to continue on a large scale for some time to come, which has strengthened a belief in trade circles that a higher market will be recorded before a great while. Based on the current rate of shipments, some authorities estimate that between 175,000 and 225,000 tons of Bessemer iron will be forwarded to European countries during the last half of 1916. England, Italy and France are negotiating for a substantial amount of new tonnage of Bessemer iron, and something definite is expected to transpire on this score within the next week or so. Prices remain unchanged at previous levels.

STEEL AND IRON PRICE CHANGES.

(Dealers' average buying prices for gross tons.)

Bessemer billets.....	\$43.00—\$45.00
Open-hearth billets.....	45.00—46.00
Open-hearth sheet bars.....	45.00—46.00
Bessemer sheet bars.....	43.00—45.00
Forging billets.....	50.00—60.00
Wire rods.....	60.00—65.00
Muck bars.....	40.00—45.00
Beams.....	2.50—3.00
Tank plates.....	2.50—3.10
Steel bars.....	2.50—3.00
Common iron bars.....	2.60—2.75
Rails.....	47.00—
Steel hoops.....	2.75—3.00
Cold-rolled strip steel.....	6.00—6.50
Sheets, No. 28 gauge.....	2.90—3.00
Galvanized sheets, No. 28.....	4.35—4.50
Wire nails, No. 28.....	2.50—2.70
Cut nails.....	2.60—
Fence wire, base.....	2.45—2.65
Barb wire, galvanized.....	3.35—
Railroad spikes.....	2.65—2.75

Pig-Iron.

Bessemer, Pittsburgh.....	21.00—21.50
No. 2 foundry.....	18.50—18.75
Basic, valley.....	18.00—18.25
Gray forge.....	18.00—
Basic, Philadelphia.....	19.75—20.25
No. 2 foundry, Northern.....	20.00—20.50
Low phosphorus.....	32.00—34.00
No. 2 foundry, Buffalo.....	18.50—18.75
No. 2 South, Cincinnati.....	16.90—17.40
Basic, del., Eastern Pennsylvania.....	19.00—19.50
Bessemer, Cleveland.....	21.00—
Northern foundry, No. 2, Cleveland.....	18.50—19.00
Gray forge, valley.....	18.00—

SPELTER MARKET EASES OFF.

Copper Displays a Firmer Tone—Lead Market Continues Dull—Better Feeling in Tin.

New York, July 31—[Special].—The attention of the metal trades switched last week from spelter to copper, which, for the first time in some weeks, commenced to develop strength, especially in electrolytic. It seems to be the general opinion of the trade that the height of production of the red metal was reached in May, with an output of 180,000,000 to 190,000,000 pounds, while the June production was well below this figure, and

July and August are expected to be still lower. Despite the dullness of the other markets—spelter, lead and tin—leading interests say that they have a good undertone and any materially lower prices are not anticipated.

Each day during the past week brought improvement in the copper market. Larger orders are being received by the selling interests, and indications point more clearly to the placing of some unusually substantial contracts shortly, probably for export. All signs now point to large business and firmer quotations. There was sold in the open market on Tuesday and Wednesday about 6,000,000 pounds of copper at a fraction above 24c. This virtually cleans up the low-priced copper in the market. The tone is firm and low quotations are gradually disappearing. Some of the second-hands are small dealers, who were at the lowest point during recent weeks and have put their prices up fractionally, and the range of these interests now is from 25½c. to 26½c. for nearby delivery, compared with 25½c. to 26½c. heretofore, an advance of ¼c., with 25c. to 25½c. being asked for distant deliveries against 24¾c. and 25¾c.

There is a general belief that the expected foreign order about which so much was said a month ago will be given out shortly and will be divided between the large producers. With the placing of this business a general buying movement is looked for on the part of domestic consumers with the establishing of the market on a satisfactory basis. The exports of copper for the week ended July 28 were 10,235 tons against 4023 tons for the same period last year. Exports since July 1 are 32,313 tons, compared with 14,621 tons in the same period last season.

The past week has been a decidedly dull one in so far as the lead market was concerned. No change whatsoever was witnessed in the prices asked by the American Smelting & Refining Co., which continues to quote 6.50c. a pound for New York delivery, while outside interests show no disposition to alter their prices, which remain at 6.15c. to 6.25c. per pound. Outside prices at East St. Louis stand at 6.10c. to 6.20c. for July, August and September delivery.

There was a better feeling in the tin market at the close of last week, due to the recovery of the London market despite the heavy arrivals of the metal during the week. Quite a little buying movement is noted. Total arrivals for July thus far are 3355 tons, while supplies afloat are 2396 tons. Available supplies in sight are, therefore, around 6000 tons.

Contrasted with the firm tone exhibited by spelter during the early part of the week, the market eased off toward the last, showing an average of ¼c. decline in the last day. Zinc ore prices at Joplin, Mo., advanced \$5 a ton last week, the high price for 60 per cent. ore being \$80 a ton, and lower grades advanced proportionally. On account of the hitherto low ore prices several mines have been shut down, while others have been closed for repairs of damage inflicted by the June floods. The outlook in the zinc districts is brighter than it has been for months.

THE WEEK'S PRICES.

	Copper.		Lead.			
	Lake.	Electrolytic.	A. S. & R. Co.	Ind.	Spelter.	Tin.
July 24.....	25.25—25.50	25.25—25.50	6.50	6.15—6.25	10.60—10.75	38.00—38.25
July 25.....	25.25—25.50	25.25—25.50	6.50	6.15—6.25	10.15—10.25	37.50—38.00
July 26.....	25.00—25.25	25.00—25.50	6.50	6.15—6.25	10.00—10.25	37.50—38.00
July 27.....	25.00—25.25	25.75—26.00	6.50	6.15—6.25	10.00—10.25	38.00—38.25
July 28.....	25.50—25.87½	26.00—26.50	6.50	6.15—6.25	9.75—10.00	38.25—38.50

PANAMA CANAL CLOSING ADVANCES IRON FREIGHTS.

Ferro-Manganese Produced in Anniston Electric Furnace.

Birmingham, Ala., July 29—[Special].—The situation in pig-iron circles remains without special feature. Sales made during the week have been light, ranging in volume from carload lots to 50 and 75 tons. One interest did book 1000 tons for shipment to Genoa. Export iron during the month of July has moved from the district to southern ports at a pretty lively rate. The records also show that the shipments of steel products, such as bars, wire and billets have been large. The bulk of these materials have moved through the ports of New Orleans, Savannah and Brunswick. A canvass of the situation as to actual base price reveals the fact that the Birmingham interests are firm in

their holding at \$15 per ton for last half delivery, though there is considerable Southern iron yet being sold as low as \$14 per ton at the furnace, as well as some warrant iron. However, as long as this condition exists no large sales are likely to be made. The natural lull incident to the warm weather is also a controlling factor in depressing the market. By September 15 to October 1 stocks on the yards of several large buyers will have decreased to such an extent as to stimulate substantial buying. At least this is the view taken by those who keep themselves well posted on available stocks. On August 15 pig-iron producers will face an increase in cost of production by reason of the voiding of the old preferential or raw material rates on coal, coke, ore and limestone, and the establishment of uniformly higher rates. The producing interests have pretty well accepted the advance in rate on coal and coke, but will vigorously contest the advance in ore rates. By reason of the unavailability of the Panama

Canal at the present time, and in prospect for at least a year hence, as a competing factor in water rates to the Pacific coast on iron and steel products, rates on these materials will be advanced on September 1. The advance in pig-iron rate will be \$2 per ton. As this rate will be uniformly advanced from other iron-producing centers, no extra burden will be imposed on Alabama producers.

During the past week the Anniston Ordnance Co., Anniston, Ala., successfully ran its first test on reducing ferro-manganese from manganese oxide ore direct in the electric furnace. This is probably the first test of this nature in the United States, and was made with Brazil ore. This plant is located about 65 miles from the best manganese ore fields in Georgia, where ore is now being mined and shipped to Eastern and Middle Western steel manufacturers. It is the purpose of the ordnance company to continue its tests, and in all probability to enter upon the manufacture of ferro-manganese on a larger scale.

The manufacturers of cast-iron pipe made some substantial sales during the past week, and report that quite an attractive tonnage is pending. Operations continue at the usual rate. The large plant at Bessemer, on which extensive improvements to the extent of \$500,000 have been under way, put in commission during the week one pit. Prices are unchanged, and are quoted per net ton f. o. b. cars at plants \$28 per ton for four-inch pipe, \$26 per ton for six-inch and up, with \$1 per ton extra for gaspipe and 16-foot length pipe.

Dealers in old material report some increase in demand for certain of their products, but as a whole, things are very quiet. Some heavy sales in steel scrap were made, but cast-iron scrap is practically nil. The domestic market is in keeping with the lethargy in foreign markets at this time—partly on account of the weather and uncertain pig-iron conditions.

The Alabama coke market is exceedingly strong and active, and its record-breaking production continues. Prices are firm at \$3 to \$3.50 per ton for furnace coke and \$4 to \$4.50 per ton at the ovens for foundry coke.

Iron and old material prices per gross ton f. o. b. cars Birmingham are:

PIG-IRON.

No. 1 foundry and soft.....	\$15.50 to \$16.00
No. 2 foundry and soft.....	15.00 to 15.50
No. 3 foundry.....	14.50 to 15.00
No. 4 foundry.....	14.25 to 14.75
Gray forge.....	14.00 to 14.25
Basic.....	15.00 to 15.50
Charcoal iron.....	22.00 to 22.50

OLD MATERIAL.

Old steel axes.....	\$22.00 to \$23.00
Old steel rails.....	11.00 to 11.50
Steel scrap.....	10.00 to 10.50
No. 1 cast scrap.....	10.00 to 10.50
Extra-heavy cast scrap.....	9.00 to 9.50
Stove plate and light cast scrap.....	9.00 to 9.50
Old car wheels.....	10.00 to 10.50
Tram-car wheels.....	9.50 to 10.00

Water-Power Legislation Needed.

Washington, D. C., July 29—[Special].—"We will and we won't." That, said President Wilson, in one of his messages to Congress, has been the trouble with the problem concerning the development and the conservation of the nation's natural resources.

Congress has been afraid to do anything lest some persons might make more money out of it. The time had come for action, President Wilson said, but although he made his references to the policy of hesitation more than two years ago, still nothing has been done. Meanwhile, millions of water horse-power have been going to waste. Whether Congress at last is to do something for the water-power resources of the country depends now upon the ability of the Senate and House conferees to reach an agreement upon the Adamson-Shields general dam bill. The Shields bill has been passed by the Senate. The Adamson bill has been passed by the House. Both are now in conference, where an attempt is being made to reach an agreement.

In view of the declaration, favoring use of natural resources, contained in the St. Louis platform, it is believed that the President and Democratic leaders will make every effort to secure the passage at this session of a water-power bill that will bring about development, and it is expected that an agreement on such a measure will be reached by the conference committee on the navigable streams bill before adjournment.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

"HARAHAN MEMORIAL" BRIDGE AT MEMPHIS.

Three Trunk Lines Use Big Double-Track Structure, Which Also Carries Highway Traffic.

The new bridge used by the Rock Island lines, the Missouri Pacific-Iron Mountain system and the St. Louis Southwestern Railway over the Mississippi River at Memphis, Tenn., which was opened for service July 15, is shown in the accompanying illustration. It is a double-tracked structure, on each side of which is a roadway for wagons, automobiles and other general highway traffic. The roadway features were not completed when the photograph was taken, and they may not be finished for several weeks, although the railroad facilities of the bridge are in use. It is known as the Harahan Memorial Bridge, in honor of the late J. T. Harahan of Chicago, who, while president of the Illinois Central Railroad, was active in planning its construction.

Work began in 1913, the first contracts being awarded in the early summer of that year. The bridge is approximately 6000 feet long from end to end, and it cost about \$3,000,000, but, including other improvements in connection with it, the entire amount expended will total in the neighborhood of \$5,000,000, possibly more. The contract for the piers and abutments was let to the Union Bridge & Construction Co. of Kansas City, Mo., and for the superstructure to the Pennsylvania Steel Co., Steelton, Pa. The approach, which is on the Arkansas side of the river and 2360 feet long, was built by the Virginia Bridge & Iron Works of Roanoke, Va. The plans for the bridge were made by Ralph Modjeski, consulting engineer in charge, Chicago, who, with W. F. Angier, assistant chief engineer, and M. B. Case, resident engineer, supervised construction.

To use the roadways on the bridge it will be necessary to build a viaduct on the Arkansas side to reach them, for they will terminate there at a point 20 feet above the ground. This viaduct will have to be built at the expense, it is stated, of Crittenden county, and it will be about two miles long, beginning at the St. Francis levee.

Now that the bridge is completed for the railroad they will soon undertake the erection of a roundhouse and a considerable number of tracks adjacent to it. The plans include large railroad yards, freight stations, warehouses, etc., at Memphis, part of which general work has been accomplished, although much remains to be done.

BALTIMORE & OHIO STATEMENT.

Exact Figures for Company's Year More Than Realize the Estimates.

Estimates were more than realized by the Baltimore & Ohio Railroad Co. in its complete statement of earnings just issued for its year, which ended June 30. The operating revenue for the twelvemonth totaled \$111,668,680, although the estimate issued several weeks ago only said that it would probably exceed \$111,500,000, and the net operating revenue was \$32,348,874, which was anticipated only as to exceed \$32,000,000. Thus predictions were true by a liberal margin in each instance.

The increase in the operating revenue was well up toward the \$20,000,000 notch, being actually \$19,852,883 higher than the total for the next preceding year, while the increase in the net operating revenue was \$4,458,587, and it is especially gratifying that these big accomplishments were made notwithstanding that the expenditures for maintenance of way and structures was over \$13,900,000, an increase not far short of \$5,000,000 as compared with the previous year, or practically 55 per cent., and the expenditures for maintenance of equipment was over \$23,500,000, an increase of nearly 47 per cent. There was also an increase of over \$2,500,000 in transportation expenses. Total expenses increased nearly \$15,400,000.

The statement for June, the last month of the company's year, showed that the increases in operating revenue as compared with last summer are continuing. It was \$10,345,418, or \$143,705 more than the total for May of this year, and \$1,682,462 more than June of last year. The net operating revenue was \$3,204,471, or but \$1920 increase over the same month of 1915, for operating expenses increased \$1,680,542, the advance in cost of maintenance of way and structures being approximately 61 per cent. for the month. There was also a large increase for maintenance of equipment.

The coal and coke traffic over the Baltimore & Ohio Railroad has been very heavy, and is still. The total carried during June was 3,287,029 tons, or 73,940 tons more than during June, 1915, although even then the coal shipments were larger than usual. The total coal tonnage for the company's year was 34,275,278 tons, an increase of 4,915,331 tons over the next preceding year. The system also handled 4,367,958 tons of coke during the year, an increase of 1,378,439 tons as compared with 1915.

NORFOLK & WESTERN'S BIG GAINS.

Net Income During the Year Ended June 30 Almost Double the Previous Year.

The Norfolk & Western Railway reports some very large gains in its statement for the year ended June 30, 1916. Operating revenues totaled \$57,304,586, an increase of \$14,317,042 as compared with the next preceding year, or over 33.30 per cent. Net operating revenue

was \$25,123,240, an increase of \$9,968,012, or 65.77 per cent., because operating expenses did not increase in the same ratio, their gain being a little more than 15.6 per cent. The net income of the road, for there were other favorable factors, was \$20,624,058, an increase of \$10,214,154, or over 98 per cent., as compared with the previous year. This is further accounted for in the drop in the percentage of the cost of operating as compared to total operating revenues, it having been but 56.16 per cent. during the last year, as compared with 64.74 per cent. for the year ended June 30, 1915.

F. H. Britton, a Hill School Railroader.

Frank H. Britton, president of the St. Louis Southwestern Railway, who died last week in St. Louis at the age of 65 years, was trained in the Hill school of railroading through his connection as a superintendent with the Great Northern Railroad for five years, from 1894 to 1899. In the latter year he went to the St. Louis Southwestern as general superintendent and rose step by step to be the chief executive of the property. During the period of his service the average trainload was raised from 179 tons to more than 300 tons, and he steadily improved the service and the condition of the railroad, its equipment and structures. By practical railroad men he is credited with having been responsible for much of the advance in the position of the road, the improvement in its service and the enhanced value of its property. When he went with it the line operated was 1250 miles and the annual gross earnings were less than \$6,000,000, but by 1913 it was operating 1600 miles of road and its gross earnings were more than \$13,250,000 a year. The decline in earnings since then was due to floods and to the adverse influence of the war upon the cotton-producing regions. The line is familiarly known as the "Cotton Belt."

Mr. Britton was born at Ovid, N. Y., and began railroad business as a telegraph operator when 18 years of age on the Michigan Southern & Northern Indiana Railroad. His first service in the South was with the Louisville & Nashville road at Clarksville, Tenn., in 1871.

Edwin Gould, chairman of the board of directors, has just been elected president of the St. Louis Southwestern Railway to fill the vacancy caused by the death of Mr. Britton. J. M. Herbert was elected first vice-president.

New Line Into the Texas Panhandle.

The Santa Fe system contemplates building a branch westward from Shattuck, on its line in Ellis county, Oklahoma, through into Lipscomb, Ochiltree and Hansford counties in the northern tier counties of the Texas Panhandle, reaching the county-seats of all, incidentally, which have the same names as the respective counties. It has taken out a charter for the North Texas & Santa Fe Railway, with authorized capital of \$100,000, and the proposed line is to be 85 miles long. Its principal offices will be at a town to be established in Hansford county. E. P. Ripley of Chicago, president of the system; F. C. Fox, E. A. Goeldner and A. B. Meyer, all of whom are officers of the Panhandle & Santa Fe Railway at Amarillo, Tex., another subsidiary line, are named as incorporators.

Several years ago it was planned to build a railroad through the northern part of the Panhandle of Texas, starting at Dalhart, in Dallam county, on the Rock Island and the Fort Worth & Denver City roads, and running thence southeast to Dumas, east to Jarvis and northeast to Ochiltree, Tex., 113 miles. A small amount of track was laid, but a receivership was created, and since then practically nothing has been done toward finishing the line. H. G. Hendricks of Dalhart was appointed receiver.

\$1,300,000 Interurban Terminal Projected.

The Commercial Improvement Co. of Kansas City, Edward J. Becker, secretary, has, according to a report from there, asked the City Council to grant a franchise for an interurban railway terminal passenger station to be built by the Kansas City Interurban Terminal Co. on Baltimore avenue between 9th and 10th sts. and extending back to Wyandotte street. It is said that the company will spend \$1,300,000 in the erection of the terminal, and that all has been subscribed excepting \$40,000, according to its officers, but the capitalization is at present nominal.

The committee of the Commercial Improvement Co.



"HARAHAN MEMORIAL" RAILROAD AND HIGHWAY BRIDGE AT MEMPHIS.

in charge of the plans is composed of Felix L. La Force, E. F. Swinney, John F. Downing, W. T. Kemper, L. P. Rothschild, W. L. Stocking, W. M. Reid, J. Logan Jones, L. N. Leslie, O. H. Martin and J. A. Prescott. The ordinance for the franchise is now before the City Council joint interurban committee.

McKeen Motor Car Exhibited on Way to Cuba.

The 70-foot McKeen railway motor car purchased by Ferrocarriles del Norte de Cuba from the McKeen Motor Car Co., Omaha, Neb., will run under its own power from Omaha to Key West for transshipment to Cuba. It will go via the following route: Chicago, Milwaukee & St. Paul, Omaha to Chicago; Illinois Central, Chicago to Birmingham; Seaboard Air Line, Birmingham to Atlanta; Central of Georgia, Atlanta to Albany; Atlantic Coast Line, Albany to Jacksonville, and Florida East Coast, rail and ferry, Jacksonville to Havana, Cuba. In order that railroad officials and others at different points may have the opportunity to inspect this latest model railway motor car of the McKeen company, the car will be on exhibition in passenger terminals at Omaha, Chicago, Birmingham, Atlanta and Jacksonville.

Annual Earnings at the Rate of \$421,000,000.

The Pennsylvania Railroad, whose fiscal year corresponds with the calendar year, reports for the first six months of 1916 operating revenues for all lines of the system east and west amounting to \$210,605,000, which indicates that the gross revenues for the whole year will probably exceed \$421,000,000. The increase for the first six months is 28 per cent. as compared with the same period of last year. The operating revenues in June were \$37,524,000, an increase of 20 per cent., for June of last year was a large month as to earnings. The percentage of increase on the lines west was considerably larger than east, for it reached 40 per cent. These heavy gains were foreshadowed in the monthly reports of earnings for some time.

New Equipment, Etc.

New York, Philadelphia & Norfolk Railroad has ordered 2 all-steel passenger cars from the Pressed Steel Car Co., Pittsburgh.

Chicago & Alton Railroad is in the market for 100 automobile cars.

Southern Pacific's rail orders this year with the Tennessee Coal, Iron & Railroad Co. are reported as totaling 80,000 tons.

Missouri Pacific Railway is getting estimates for 6 steel dining cars.

Baltimore & Ohio Railroad has bought, subject to an equipment trust, 1500 steel hopper cars from the Jamison Coal & Coke Co., and they will now be distributed to shippers, as is the other equipment of the road.

Seaboard Air Line Earnings Swelling.

The Seaboard Air Line Railroad Co. reports for the company's year ended June 30, 1916, total revenues of \$24,492,788.93, increase as compared with the preceding year \$2,713,472.71, or nearly 12½ per cent.; operating expenses \$16,332,545.81, increase \$1,044,993.78; net revenue \$8,162,243.12, increase \$1,068,478; net income \$2,519,978.35, increase \$1,254,932.73, this being exclusive of the adjustment bond interest; including this interest the net income was \$1,269,978.35, increase \$1,254,932.73; net surplus \$960,430.75, as compared with a deficit of \$300,397.57 in the previous fiscal year. Liberal expenditures were made for the maintenance of the property.

Southern Railway Almost Reaches Record.

A preliminary statement has been issued by the Southern Railway covering the results of operation for its year which ended June 30, 1916, and showing gross revenues of \$69,997,675, an increase of \$7,798,165, as compared with the next previous year, and only \$753,322 less than the record year of 1914. Moreover, the

net after taxes for the year terminated, a month ago, was \$21,004,005, an increase of \$7,603,950 over last year and \$4,793,047 more than 1914, when the gross was over \$70,750,000. Operating expenses have been held down to \$46,041,116, as compared with \$46,174,711 last year and \$51,760,649 in 1914.

Western Maryland's Record Earnings.

The statement of the Western Maryland Railway, just issued, for its year ended June 30 shows total revenues \$10,930,369, increase as compared with the previous year \$2,246,910; net revenue \$3,890,760, increase \$1,464,714; operating income after taxes \$3,542,020, increase \$1,421,974.

The total revenues were the highest in the history of the road, and the monthly reports show that gains are continuing, June having displayed an increase of \$148,680 as compared with the same month of last year.

Line to Chattanooga Industries.

A report from Chattanooga says that the Chattanooga Traction Co. has completed its Dry Valley extension, which is to be used by the Cincinnati, New Orleans & Texas Pacific Railway (Queen & Crescent Route) to reach several new industries. It is about eight miles long, and will be operated with electric cars by the traction company for passenger service and with steam locomotives of the railroad company for freight service. It has been in course of construction for about a year.

A Lumber Railroad Extending.

The Whiteville Lumber Co., of which Nathan O'Berry, Goldsboro, N. C., is president, intends to complete its main line railroad, now in operation out of Whiteville, N. C., southeast to Reaves Ferry, on the Waccamaw River, and it may be continued on to Shalotte, in the southern part of Brunswick county. The company has also considered the possibility of building a line north from Whiteville to connect with the Seaboard Air Line, about 12 miles distant. No decision as to the latter has yet been made.

Lubbock & Great Northern.

The Lubbock & Great Northern Railroad Co. of Lubbock, Tex., capital \$150,000, has been chartered to build a line about 125 miles long from Lubbock northeast to connection with the Missouri, Kansas & Texas Railway in Collingsworth county, probably at Wellington, that being the terminus of the Katy road in that region. This proposed construction would afford a through line to Altus, Okla., and thence via intersecting lines to all points. The incorporators are J. M. Elliott, S. S. Houston, F. V. Leak and others.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Over \$40,000,000 Worth of Lumber Used in Mine Pits Annually.

The consumption of wood in coal mines is greater than many people realize, and its use is likely to be maintained. The use of treated timber for gangway sets and other purposes has been developed to a limited extent. The lines along which assistance could perhaps be given are the further uses of treated timber and designs and information on the construction of company dwelling-houses.

It has been estimated that every ton of coal mined in the United States requires the expenditure of about seven cents for pit lumber. Taking the coal production of the country at roughly 558,000,000 tons, this means an annual expenditure for pit lumber of over \$40,500,000. This includes what is ordinarily known as pit

props, timber sets, brattices, overcasts, etc., or the lumber, mostly rough, which is used underground alone.

Above ground no one knows or can estimate accurately how much is spent each year for building material in the shape of lumber. However, lumber enters into the construction, either in whole or in part, of practically all mine buildings, such as tipples, breakers, hoist-houses, sub-stations, offices, stores, magazines, fanhouses, shops, warehouses, oilhouses, power plants, boiler plants, pumphouses, stables, etc.

Furthermore, with approximately 750,000 men directly engaged in the coal industry, nine-tenths of whom live in company houses, the coal operators of the land must provide housing conditions for, say, 3,000,000 people. The majority of the houses are of frame construction, although brick, hollow tile and concrete and stucco are being employed to a limited extent.

As years go on, and the difficulties of mining due to greater depth increase, a greater amount of timber must be used. Not only this, but the price of this timber is constantly increasing, so that the amount spent for pit lumber from year to year increases more rapidly than does the output.

Much Lumber Will Be Needed for European Rebuilding.

An outline of what the American lumber industry may expect in the way of foreign trade when the European war ends was given at the national rotary convention by Ernest W. Tickle of Liverpool in a letter to his brethren of the American lumber trade. Here is the way he expresses the conditions in the industry as it will be abroad:

"There's a good—and overwhelmingly good—time coming for the lumbermen of your country and ours, when once this cataclysm is behind us, perchance before the actual end of the bloodshed arrives, because if once the German army has to vacate the present scene of warfare in Northern France and Belgium, then the first duties of the respective governments of those mangled territories will be to rehabilitate as quickly as possible the shattered industries which formerly headquartered there, for, as you know, these were the heart-centers of the commerce and industries of our allies. Think of the hundreds of factories and workshops and the myriads of homes to be rebuilt, and then try and estimate the lumber bill that will be wanted for immediate delivery when once the job is taken in hand!"

Mr. McCullough Incorrectly Quoted.

Regarding the statement that Ernest McCullough of Chicago was advocating the use of a mixture of cement, sand and skim milk as a fire-retardant paint for wooden shingles, Mr. McCullough writes the MANUFACTURERS RECORD that the statement has no element of truth in it. He adds:

"I was asked what I thought of a paint of cement grout as a fire retardant for wooden shingles, and expressed a doubt as to it being a success. I volunteered the remark that if water was used the wooden shingles would absorb it, when the sand and cement would fall off. Then added that if skim milk were used instead of water the coating would stick better. The mixture of skim milk with cement to make a waterproof or cold-water paint is an old idea. That I advise its use as a fire retardant for wooden shingles is not true, and a wrong use is being made of my name in circulating such statements."

Iron and Coal Mining Operations in Germany.

According to the reports of the German Iron and Steel Association, the production of raw iron in Germany including Luxemburg, in 1914 was 14,384,000 metric tons and in 1915 only 11,783,000 metric tons. Of this amount, about 30 per cent. was produced in Lorraine. The total production in 1912 was 17,868,909 metric tons.—United States Commerce Reports.

S. J. Ervin, J. E. Hudson and associates have incorporated the Klison Hosiery Mill of Connelly Springs, N. C., with a capital of \$70,000.

MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

Beyer Barometric Condenser.

Complete steam condensing plants for all service conditions are now offered to the trade by the Ingersoll-Rand Company, 11 Broadway, New York. This equipment includes the Beyer barometric condenser, for which the company has secured the patent rights; Imperial duplex and Ingersoll-Rogler straight line, reciprocating, dry vacuum pumps, and, where required, Cameron simplex and centrifugal pumps.

The Beyer barometric condenser is of the counter-current type, in which air and cooling water flow in opposite directions. The steam inlet is at the bottom of the condensing vessel, the water inlet above and the air removal opening at the top. The sheets of cooling water overflowing the pool at the inlet point meet the entering steam. The two are brought into intimate contact by conical baffle-plates assisting the water to absorb to its full capacity the latent heat of the steam. The non-condensable air liberated in the condensing action rises through the falling water to the removal point at the top, being cooled to practically the temperature of the incoming water. It is also to be noted that ample opportunity is given for the removal of the air content of the water before it mixes with the steam. This, the manufacturer points out, not only facilitates the mixing process, but permits the removal of air and vapor at a comparatively low temperature, a distinct advantage, as the reduced volume saves in vacuum pumpage horse-power.

The steam inlet is of large diameter to secure low velocity, and is hooded in such a way as to discharge the steam into the center of the condensing vessel. The air removal opening is also of ample area, and is protected by a self-draining baffle and trap. This, it is said, positively prevents water being carried over into the vacuum pump.

The hot waste water is discharged through the self-draining tail pipe. This pipe straddles the hot well and rigidly supports the condenser.

The Imperial and Ingersoll-Rogler vacuum pumps are of the manufacturer's standard type, and have been previously described in the MANUFACTURERS RECORD.

When a water pump is required to elevate cooling water to the condenser head Cameron pumps are provided. These may be either reciprocating or centrifugal designs, as desired. The Ingersoll-Rand Company, however, emphasizes the fact that, where the level of the cold well is of sufficient height above the hot well, the condenser will lift its own cooling water, dispensing entirely with a water pump.

The manufacturer in presenting this equipment brings out the point that the vacuum and water pumps, being independently operated, can be regulated to suit varying water temperatures and conditions, and that this plant, in addition to its efficiency in general service, is admirably adapted for duty as a central condensing unit serving a number of prime movers.

Austin Pneumatic Scarifier.

To repair and resurface earth, gravel and macadam roads economically, there is no more important machine than the road scarifier, and the use of road scarifiers for maintenance work has become so closely associated with the general use of road rollers that a demand has arisen for a reliable form of scarifier which forms an

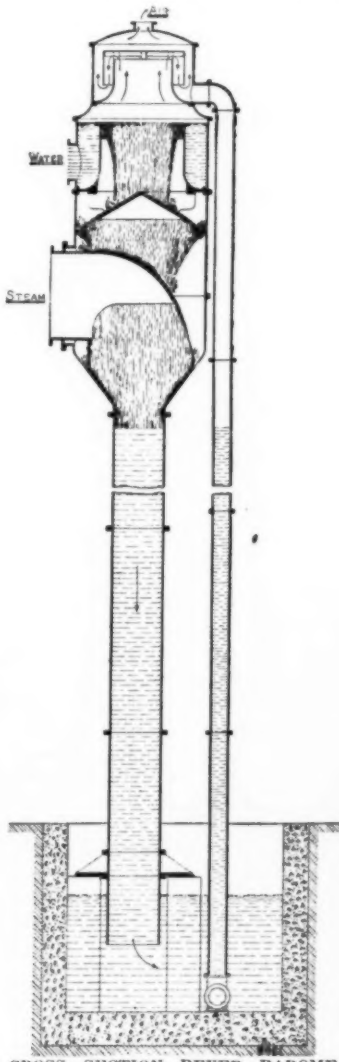
integral part of a road roller. To meet that demand the Austin Manufacturing Co., 910 S. Michigan avenue, Chicago, has developed the Austin pneumatic scarifier to use the weight and power of the roller to scarify the road surface in an approved manner. One of the attractive features of the attachment is that it can be put on any standard Austin motor roller without materially changing the construction or arrangement of parts.

In general design the scarifier consists of a cylinder attached to the rear end of the roller frame, to which pressure can be applied from air storage tanks mounted on either side of the cylinder. The cylinder is connected to the scarifier by a connecting rod pinned to each end, which prevents any straining of the scarifier attachment transferring undesirable vibration or strain to the cylinder itself. The scarifier attachment consists of a hinged frame hung on the rear end of the roller frame. This hinged frame is spanned by a steel yoke attached to the lower end of the piston connecting rod, so that a downward pressure of the piston forces the scarifier teeth

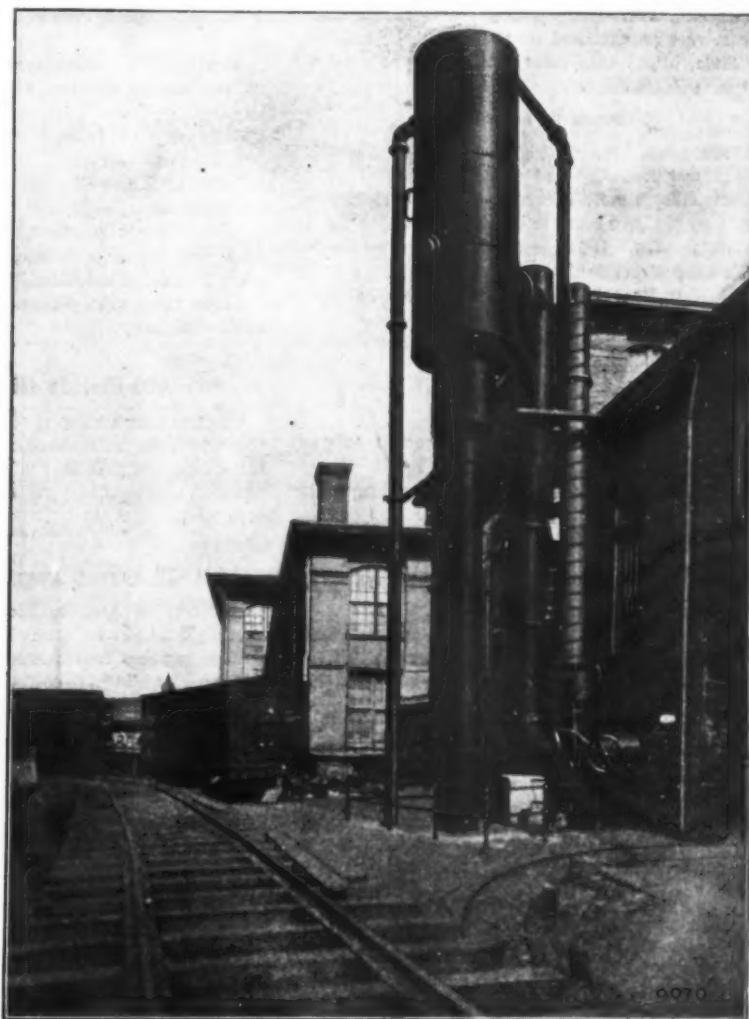
raise the air pressure in the tank to 120 pounds per square inch, which is ample for operating the scarifier, and a safety valve is supplied in the tanks which blows off at that pressure. The tanks are tested to 300 pounds pressure, and are fitted with a pressure gauge and the compressor is fitted with an automatic cut-out, so that when the regular working pressure is reached the air compressor is automatically cut out, saving wear and loss of horse-power.

An important feature in the construction of the scarifier, which is made to withstand the severest stress incidental to such work, is its accessibility. No parts are hidden away, the compressor, the tanks, the cylinder and all their connections are all in easy positions for adjustment and repair. Another important feature is the ample air storage provided. The utility of such a machine is entirely dependent on the power behind it, and unless a good reserve of power is obtained the very best construction will fail to do good work.

Very little skill or attention is called for in operating



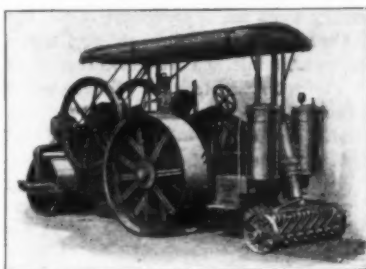
CROSS SECTION BEYER BAROMETRIC CONDENSER.



BEYER BAROMETRIC CONDENSER OF THE NEWBERRY (S. C.) COTTON MILLS.

into the ground and keeps them there during work and by a simple reversing cock the pressure can be applied to the lower end of the piston and quickly raise the teeth out of the work.

Air pressure is maintained in the tanks by a small



AUSTIN ROAD ROLLER WITH SCARIFIER ATTACHED.

compressor mounted on the top of the engine cylinder and operated by the engine from the crankshaft. A few minutes' running of the compressor is sufficient to

the scarifier. One four-way cock controls all the movements. Once the machine is lowered into the work, it automatically adjusts itself to the surface of the road. The air pressure in the piston accomplishes this readily, while the pressure at the same time acts as a buffer in protecting the roller and its parts from the strain and vibration of doing the heavy work.

Each of the seven types of teeth are adjustable separately for wear and depth of cut, and are so attached that the loosened material does not clog up in front. The road wheels at each end of the scarifier simply act as guides or guards so as to adjust the depth of cut and maintain an even and uniform work and to prevent the teeth from diving when soft material is encountered.

Austin rollers have two speed gears, and can be fitted with differential gearing, which are important features in scarifying hard roads, on curves or on hills.

The Columbus (Ga.) Manufacturing Co. will add 246 looms. This new weaving machinery has been ordered from the Draper Company, Hopedale, Mass.

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

Bonds Voted.

Hillsboro, Tex. City voted \$10,000 bonds to improve streets.

North View, Va.—Town will issue \$24,000 bonds to pave streets.

Ozona, Tex.—Crockett county voted \$20,000 additional road bonds.

Perry Fla.—Taylor county voted \$600,000 bonds for road construction.

Pittsburg, Tex.—Camp county voted \$100,000 bonds to construct macadamized roads.

Tehula, Miss.—City voted \$5000 bonds to construct and pave sidewalks, etc.

Bonds to Be Voted.

Blountstown, Fla.—Calhoun county votes August 15 on \$130,000 bonds for road construction.

Centerville, Tenn.—Hickman county votes September 14 on \$225,000 bonds to construct roads.

Houston, Tex.—Harris county will vote on \$15,000 bonds to construct roads.

Key West, Fla.—Monroe county will vote on \$125,000 bonds to construct roads on Florida Keys.

Rayville, La.—Richland Parish votes September 16 on \$130,000 bonds to construct roads, etc.

Contracts Awarded.

Arcadia, Fla.—De Soto county awarded \$250,000 contract to construct 60 miles of road.

Arcadia, Fla.—City awarded contracts aggregating \$234,876.70 for street improvements, etc.

Baltimore, Md.—City awarded \$145,382.82 paving contracts.

Gainesville, Ga.—City awarded contract for 20,000 square yards of concrete paving.

Hopkinsville, Ky.—Christian county awarded \$208,277.88 contract for 86 miles of road construction.

Lake Charles, La.—City awarded contract for 4700 square yards street paving.

Lexington, Ky.—City awarded contract for 8400 square feet of concrete sidewalks.

Paragould, Ark.—City awarded contract for 10,000 square yards of concrete and asphalt street paving, including curb and gutter; cost \$25,000.

Richmond, Va.—City awarded contract for street improvements to cost \$4408.00.

Richmond, Va.—City awarded contract for street improvements to cost \$3000.

Rockville, Md.—Montgomery county awarded \$30,000 contract to reconstruct 5½ miles of road.

Selmer, Tenn.—City awarded contract for 24,000 feet of concrete sidewalks.

Stuttgart, Ark.—City awarded contract for 22,617 square yards pavement, 18,007 linear feet concave gutter and 1276 linear feet of combined curb and gutter.

Thibodaux, La.—State awarded contract for 10 miles of highway.

Wickliffe, Ky.—Ballard county awarded contracts for 100 miles of gravel roads, etc.; expenditure \$303,000.

Winona, Miss.—Montgomery county awarded \$70,000 contract to construct 15 miles of road.

Wise, Va.—Wise county awarded contracts for grading 10 miles of roads.

Contracts to Be Awarded.

Beaufort, N. C.—Carteret county will construct 4½ miles of road.

Benton, Tenn.—Polk county will build 18½ miles of highway.

Cumberland, Md.—City receives bids until August 11 for 4900 square yards of brick pavement on concrete base, etc.

Frostburg, Md.—City receives bids until August 5 for 1500 feet of grading and paving.

Galveston, Tex.—City receives bids until August 10 for 21,000 square yards pavement, 1000 linear feet concrete curbs, etc.

Goochland, Va.—Goochland county will construct 3 sections of soil road, aggregating 8.3 miles.

Joplin, Mo.—City will pave South Main street; cost \$30,138.50.

Kingsport, Tenn.—Kingsport Improvement Co. will construct 5 miles of concrete sidewalks.

Lakeland, Fla.—City will pave 5 miles of streets to connect with county roads.

Lenoir City, Tenn.—City receives proposals until August 11 for 30,000 square yards paving, 28,000 cubic yards grading, 20,000 linear feet curbing, 6000 square yards guttering, etc.

Louisburg, N. C.—Franklin county will construct 25 to 30 miles of sand-clay roads.

Memphis, Tenn.—Memphis Street Railway Co. will repave certain streets with wood block; cost \$27,461.

Monticello, Ga.—City will construct 2 miles of cement sidewalk.

Portsmouth, Va.—Norfolk county will grade and ditch 5¼ miles of road.

Pontotoc, Miss.—City receives bids until August 10 to improve 3 miles of streets, 6 miles of curb and gutter, etc.

Rockville, Md.—Montgomery county receives bids until August 8 to construct 4½ miles of State-aid highway.

Staunton, Va.—Valley Turnpike Co. will expend \$75,000 to improve highway.

Warsaw, N. C.—City has \$5000 available for street improvements.

Wise, Va.—Wise county will expend \$100,000 to grade and macadamize roads; 18 miles grading; 22 miles bituminous macadam.

Yazoo City, Miss.—Yazoo county will construct 4 miles of highway.

\$250,000 Florida Highway Contracts.

Contracts amounting to \$250,000 for highway construction have been awarded by the De Soto County Commissioners, Arcadia, Fla. One award is at \$100,000 for a 25-mile road and the other at \$150,000 for a 35-mile road.

\$234,876 Street Improvement Contracts.

The city of Arcadia, Fla., has awarded contracts totaling \$234,876 for street improvements. These will include grading foundations, asphalt concrete paving and concrete bridges to cost \$145,395, and concrete curb, gutters and headers to cost \$50,650.

\$303,000 Kentucky Highway Contracts.

Ballard County Commissioners, Wickliffe, Ky., will expend \$303,000 for constructing 100 miles of gravel roads, with accompanying bridges. Contracts have been awarded for these improvements.

\$30,000 Maryland Road Contract.

The Montgomery County Commissioners, Rockville, Maryland, have awarded a \$30,000 contract for road construction. This contract calls for building a 5½-mile highway from Norbeck.

Good Roads Bring Better Hotels, Garages and the Painting of Buildings.

Raleigh, N. C., July 29—[Special.]—Work is being pushed rapidly upon the improvement of the big highways, the Central and Capital, in the abolition of railway crossings at grade and the relocation of lines to give better routes and shorter ones. Wayne county thus cuts out two miles of the distance between Goldsboro and Kinston; Lenoir, one mile between Kinston and Newbern; Craven, one mile between Newbern and Morehead City. Craven, by 11 miles of relocation, gets rid of four grade crossings. These highways are being marked with the blue and white band, which has been adopted as the State highway colors.

The town of Kinston, which, like the section named, is on the Central Highway, is doing a great amount of Warrenite paving, at a cost of \$200,000.

Johnston county is to vote on another bond election for roads August 15.

Remarkable improvements in the painting of build-

ings of all sorts along these good roads are observed, as well as improvements in hotel and garage service.

The great rains and flood water caught three of the eastern counties—Lenoir, Craven and Carteret—in the midst of road building, and caused some delay in the work.

Textile Notes.

J. A. McNorton and associates, Wilmington, N. C., plan to establish a hosiery knitting mill.

Garnett Andrews of the Richmond Hosiery Mills, Chattanooga, Tenn., and associates plan to organize a \$25,000 company to build a hosiery knitting mill at Cneida, Tenn.

Contract for building an additional \$60,000 three-story structure for the Lanett (Ala.) Bleachery and Dye Works has been awarded to the Gallivan Building Co., Greenville, S. C.

The Turner Mills Co., W. D. Turner, president, Statesville, N. C., is reported as contemplating the construction of an additional cotton mill at Munbo, N. C., on the Catawba River.

W. H. Fogleman, Henderson, N. C., has received contract to erect a one-story 75x37-foot mill-construction building, costing \$2600, for the Henderson Hosiery Co. This company was mentioned in July as incorporated with a capital stock of \$100,000.

The Georgia Cordage Mills, Scottdale, Ga., lately noted to add weaving machinery, will install 14 heavy looms for weaving duck, and has purchased this equipment. After September 15 the enterprise will be known as the Georgia Duck & Cordage Co., capital \$60,000.

The Raybell Manufacturing Co., Selma, Ala., has been organized with \$60,000 capital and succeeds the Valley Creek Cotton Mills; W. T. Bell, president, Greenwich, Conn.; W. B. Craig, vice-president, Selma; F. H. Elmore, secretary-treasurer, Montgomery, Ala.

The Leon-Ferenbach Company, Wilkes-Barre, Pa., and New York, has organized a branch company to build its silk mill at Johnson City, Tenn. C. L. Marshall is president and A. B. Crouch is secretary-treasurer. A two-story 200x50-foot building will be constructed for the equipment of machinery.

The Nick-A-Jack Hosiery Mills, Chattanooga, Tenn., has let contract to the Parks-Grimes Company, Chattanooga, to build plant (recently mentioned as to replace present establishment) in South Chattanooga. About \$10,000 will be expended for a two-story 120x70-foot brick construction main building and a one-story 70x40-foot dyehouse adjoining. It is planned to add 100 knitters to the present equipment.

Contract was awarded to the Gallivan Building Co., Greenville, S. C., for the previously mentioned addition of the Martel Manufacturing Co., Egan, Ga. This addition (now progressing) will be 90x75 feet, of standard mill construction, for a weave shed. The company will install 11,382 new automatic looms, replacing 250 old-style looms, this new equipment having been ordered from the Draper Company of Hopedale, Mass.

State Bank Reports.

R. N. Sims, State bank examiner, reports for the quarter ended June 30 that the Louisiana State banks have total resources amounting to \$133,147,949.93, which includes loans and discounts of more than \$76,500,000. Total deposits are more than \$89,000,000, which include savings deposits of nearly \$28,000,000 and individual deposits of over \$53,350,000.

J. Dukes Downes, State bank commissioner, reports total resources of the State banks and trust companies in Maryland as of June 30 at \$166,173,063.53, including loans and discounts of nearly \$71,000,000. Total deposits are more than \$120,500,000, of which nearly \$74,000,000 are demand deposits and over \$41,000,000 time deposits.

Ivy M. Mauldin, State bank examiner for South Carolina, reports that on June 30 its State banking institutions had total resources of \$74,861,861.73, including loans and discounts of more than \$57,640,000. Total deposits were more than \$44,000,000, of which very nearly \$19,300,000 were savings deposits and over \$19,250,000 deposits subject to check. Time deposits were more than \$5,800,000.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the post-office will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ala., Eufaula.—Barbour county will construct bridge over Chanabatchee Creek near Foy's Mill and over White Oak Creek, both on Eufaula and Abbeville Rd.; Board of Revenue receives bids until Aug. 24 on steel structure with concrete piers and floor, or on reinforced concrete construction; County Board of Revenue receives bids at office W. S. Keller, State Highway Engr., Montgomery, Ala., until Aug. 17; lately noted to build 3 concrete bridges, replacing structures destroyed by flood, and to construct 24 other bridges. (See Machinery Wanted—Bridge Construction.)

Ala., Mobile.—Mobile County Revenue & Road Comms. will build bridge; steel span; bids until Aug. 14; plans and specifications from C. A. Alvarez, County Clerk. (See Machinery Wanted—Bridge.)

Ala., Tuscaloosa.—Tuscaloosa County Commissioners will build 6 bridges to replace structures lately damaged by flood; steel or concrete; \$10,000 expenditure.

Ark., Hamburg.—Ashley County Levying Court authorized appropriation to construct 3 steel bridges across Bayou Bartholomew at Wilnot, Montrose and Morrell to cost \$8000 each; invite bids on Wilnot and Montrose structures; later will let contract for structure at Morrell.

Fla., Arcadia.—City let tentative contract Stidman & Hughes, Limestone, Fla., to construct 2 concrete bridges; Cravens & Kimmel, Engrs., Parker Bldg., Arcadia. (See Road and Street Work.)

Fla., Cocoa.—Brevard County Comms., Titusville, Fla., will invite bids to be opened in Sept. for construction of proposed Cocoa-Merritt Island bridge; issued \$75,000 bonds; Engr. Rogers of Daytona, Fla., will supervise construction. (Noted in June.)

Fla., Miami.—Dade County Comms. ordered vote Aug. 22 on \$600,000 bonds to construct bridge across Biscayne Bay, between City of Miami and Miami Beach. (Lately noted.)

Fla., Pensacola.—Escambia-Santa Rosa Bridge Co. will organize to build bridge across Escambia River at Ferry Pass; steel structure; reinforced foundations and dirt fill; total length, 2½ mi.; Comms. Escambia

and Santa Rosa counties will grant franchise. Address H. W. Thompson, Clerk Circuit Court Santa Rosa County, Milton, Fla.

Fla., Punta Gorda.—DeSota County will construct bridge across Charlotte Bay between Punta Gorda and Charlotte Harbor; distance across bay is about 1½ mi.; having plans prepared for reinforced concrete structure, with draw of 50 ft. clear opening and minimum 8-ft. head room clearance at high tide; plans being prepared by H. S. Jaudon Engineering Co. of Atlanta and Savannah, Ga., and Box 384, Bartow, Fla. (latter address for this work); bids will be asked.

Md., Crisfield.—City contemplates repairing or rebuilding draw-bridge across Little Annamessix River. Address The Mayor.

Md., Ocean City.—Worcester County Commissioners, Snow Hill, Md., will construct bridge from mainland to Sandy Point at northern end of land owned by Atlantic Realty Co. (See Land Development.)

Miss., Tutwiler.—City will construct 70-ft. steel span across Hopson Bayou; Mayor and Board of Aldermen receive bids until Aug. 11; A. T. Robard, Clerk. (See Machinery Wanted—Bridge Construction.)

Miss., West Point.—Clay County Supvrs., L. J. Howard, Clerk, plan to issue \$30,000 bonds for bridge and road construction.

N. C., Gastonia.—Gaston County Comms. will expend \$100,000 to rebuild bridges destroyed by flood on Catawba and South Fork rivers.

N. C., Mt. Holly.—Mecklenburg County Comms., Charlotte, and Gaston County Comms., Gastonia, will build \$15,000 bridge at Mt. Holly ferry to replace structure recently damaged by flood.

N. C., Newton.—Catawba County Comms. will rebuild bridges destroyed by recent flood.

N. C., Statesville.—Iredell County Comms. will rebuild bridges destroyed by recent flood.

N. C., Wadesboro.—Anson County Comms. will construct bridges replacing those destroyed by recent flood; 21 bridges were washed away.

S. C., Gaffney.—Cherokee County Comms.

plan to repair and rebuild bridges damaged by recent flood; may expend \$70,000.

S. C., York.—York County Comms. plan to rebuild and repair bridges destroyed by recent flood; expend probably \$10,000.

Tenn., Kizer.—Loudon County Bridge Com., J. L. Clark, Chrmn., Loudon, and Blount County Bridge Com., C. H. Hill, Chrmn., Maryville, Tenn., will construct reinforced concrete arch bridge at Kizer; 35-ft. clear span; 12-ft. roadway; reinforced concrete railings 3 ft. high; carrying capacity, 20-ton road roller; bids until Aug. 19. (See Machinery Wanted—Bridge Construction.)

Tex., Pittsburg.—Camp County Comms. let contract N. B. Gregory, Texarkana, Tex., at \$502 to construct crossing at Cypress between Pittsburg and Mt. Pleasant; length, 1800 ft.; mainly rock and concrete; surface of concrete with width of 10 ft.; 3 vehicle passways, each 20 ft. wide and 40 ft. long; crown of roadbed 24 ft. wide.

Va., Norfolk.—Norfolk-Berkley Bridge Corp., W. B. Dougherty, Secy., is reported to have let contract Jas. Stewart & Co., 30 Church St., New York, for construction bridge connecting Norfolk and Berkley; wires Manufacturers Record: Contract not finally closed; will give full particulars when closed.

Va., Portsmouth.—Norfolk County will reconstruct county's portion of Indian Poll bridge over Lafayette River and construct abutment to Broad Creek bridge; Com. for Purchase and Improvement of Roads receives bids until Aug. 4; G. P. Coleman, State Highway Commr., Richmond, Va. (See Road and Street Work and Machinery Wanted—Road and Bridge Construction.)

Va., Prince George.—Prince George County will construct reinforced concrete bridge 35 ft. long over Second Swamp; bids until Aug. 4; also alternate bids on steel and timber; G. P. Coleman, State Highway Commr., Richmond, Va. (See Machinery Wanted—Bridge Construction.)

Va., Staunton.—Valley Turnpike Co. will expend \$75,000 to construct bridges and resurface road; let contract Virginia Bridge & Iron Co., Roanoke, Va., to construct 3 iron bridges—one over North River at Mt. Crawford and one each on either side of town of Mt. Jackson; cost \$18,000; also plans to build concrete bridges.

W. Va., Hamlin.—Lincoln County Court will build 3-span highway bridge; 16-ft. driveway; across Guyandotte River at mouth of Big Hart Creek; 600 cu. yds. reinforced concrete masonry; bids until Aug. 9 (postponed from recent announcement for Aug. 4); plans and specifications for \$2 from Oliver & Maupin, Engrs., Huntington, W. Va. (See Machinery Wanted—Bridge Construction.)

W. Va., Roncoverte.—Chesapeake & Ohio Ry., F. I. Cabell, Chief Engr., Richmond, Va., will construct viaduct at Walnut St. to cost \$35,000.

CANNING AND PACKING PLANTS

Ala., Bayou Labatre.—Alabama Canning Co. will improve oyster cannery; cost \$5000.

Fla., Eustis.—Lemon Avenue Packing Co., capital \$30,000, inceptd.; G. W. Holmes, Pres.; S. L. Harris, V.-P.; V. P. Felt, Secy.-Treas.; to pack fruit.

Fla., Miami.—J. Peterson is reported to building plant to manufacture jellies and jams, to can tomatoes, beans, etc.

Ga., Augusta.—Georgia-Carolina Packing Co. organized with authorized capital \$1,000,000; build meat-packing plant; J. P. Wood, Pres.; R. C. Berckmans, V.-P.; A. G. Hackett, Secy.-Treas. (In June noted inceptd.)

Ga., Statesboro.—Bullock Packing Co. organized with \$150,000 capital stock; Brooks Simmons, Pres.; W. G. Raines, V.-P.; D. N. Rigs, Secy.; will build meat packing plant; let contract Carson Construction Co., Savannah, Ga., for 4-story, 119x90-ft. hollow tile and concrete construction building, costing \$55,000; install machinery costing \$35,000; daily capacity 300 hogs; C. L. Brooks & Co., Engrs., Moultrie, Ga. (Company previously noted proposed.)

La., New Orleans.—Fisher Shrimp Co., capital \$30,000, inceptd.; Jas. V. Dunbar, Pres., 1013 Maison Blanche; Jules G. Fisher, V.-P. and Gen. Mgr., 3450 Magazine St.; E. A. Dunbar, Secy., 1013 Maison Blanche, all of New Orleans; L. H. Jastremski, Treas., Houma, La.

S. C., Greenville.—J. B. Bruce and associates plan organization \$75,000 company to build meat-packing plant; committee appointed includes J. B. Bruce, Chrmn.; C. O. Allen, R. I. Woodside, W. P. Anderson and others.

Tex., Fort Worth.—Armour & Co. (main office, Chicago, Ill.) will erect addition; increase capacity of meat packing plant.

Va., Roanoke.—Wilson & Co., 312 E. Campbell Ave., propose changes and improvements to meat-packing plant; has engaged engineer.

CLAYWORKING PLANTS

Tex., Bay City.—Bricks, Silo Blocks, etc.—Bay City Clay Products Co. organized; Jas. W. Rugeley, Pres.-Mgr.; Chas. H. LeGendre, Secy.-Treas.; has plant to manufacture bricks, drain tile and hollow building tile; will increase capacity; in near future may manufacture hollow silo blocks.

COAL MINES AND COKE OVENS

Ky., Pineville.—Blue Ridge Coal Co., capital \$10,000, inceptd. by M. C. Pitman of Pineville, John Centers and Addie Centers of East Bernstadt, Ky.; leased and will develop Yellow Creek mines on Kentucky & Virginia R. R.

W. Va., Logan.—No. Five Block Coal Co., capital \$50,000, inceptd. by H. C. Jones of Logan, Fred Easley, W. B. Crickmer and others of Omar.

COTTON COMPRESSES AND GINS

Fla., Gainesville.—E. D. Knight of La Crosse, Fla., will erect gin.

Ga., Lyons.—Van Odom, Jr., and Geo. B. McLeod will establish gin.

Ga., Waycross.—Farmers' Warehouse & Ginnery Co. plans reorganization and increasing capital stock.

Okla., Bristow.—Patty Gin Co. will build cotton gin and cottonseed-oil mill; capitalization \$50,000.

Tex., Lodge.—Owen-Burnett Gin Co., capital \$12,000, inceptd. by W. J. Owen, O. B. Burnett and Wm. Gerlach.

COTTONSEED-OIL MILLS

Ky., Louisville.—Dixie Crushers Co., capital \$5000, inceptd. by C. J. Murphy, T. J. Ross and C. Blatz.

Okla., Bristow.—Patty Gin Co. will build cottonseed-oil mill and cotton gin; capitalization \$50,000.

Va., Richmond.—King Cotton Seed Co., capital \$25,000, inceptd.; James Mullen, Pres.; Cyrus W. Beale, Secy. and Treas.

DRAINAGE SYSTEMS

Miss., Clarksdale.—Comms. Harris Bayou Drainage Dist. will construct 9000 cu. yds. ditch work; bids at office Maynard & Fitzgerald, Attns., until Aug. 9; A. L. Dabney, Engr., Porter Bldg., Memphis, Tenn.

Mo., Ulrich.—Pioneer Drainage Dist. Supervisors, H. A. Stewart, Secy., let contract A. V. Willis & Sons, 517 Boatman Bldg., St. Louis, at \$49,240 to construct 11½ mi. drainage canals; length main ditch, 9 mi.; Knob Creek lateral No. 1, 3500 ft.; No. 2, 2154 ft.; White Oak lateral, 4904 ft.; Relief Ditch, 630 ft.; Brooks & Jacoby, Engrs., 512 Shukert Bldg., Kansas City, Mo. (Call for bids noted in June.)

ELECTRIC PLANTS

Ala., Andalusia.—Andalusia Light & Power Co. contemplates installing 200 H. P. boiler, 175 K. W. generator and engine, super-heater and condenser.

Ala., Fairhope.—City, A. O. Berglin, Mayor, has completed construction of lately-noted electric-light plant; cost \$17,000; X. A. Kramer, Magnolia, Miss., Engr. (Bids were noted in Feb.)

Ala., Troy.—City will install equipment in electric-light plant, including two 300 H. P. boilers, 600 H. P. tandem compound condensing engine, directly connected to 400 K. W. generator; purchased equipment. Address The Mayor.

Ala., Wedowee.—W. M. Dobson contemplates installing engine in electric-light plant to be used as auxiliary during high and low water periods.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Ark., Helena.—Helena Gas & Electric Co., W. J. O'Brien, Engr., Helena, has \$6000 available for expenditure to install ornamental street-lighting system lately noted; has let contracts except for cable. (See Machinery Wanted—Cable.)

Ark., Little Rock.—City is considering enlargement of electric-light plant to furnish power for commercial purposes. Address The Mayor.

Fla., Chipley.—Chipley Light & Power Co. contemplates constructing 2 mi. transmission line to lime quarry which will be operated by electricity.

Fla., Manatee.—City, C. H. Combs, Supt. Water-works, will not install lately noted electric plant; decided to continue present lighting contracts.

Fla., Winter Haven.—Winter Haven Water, Ice & Light Co. contemplates constructing 4 mi. transmission lines.

Ga., Cochran.—City votes again Aug. 20 on \$3000 bonds to extend electric-light system and water-works; J. C. Urquhart, Mayor. (Bond election lately noted declared illegal; Wm. M. Crook, 614 Grand Bldg., Macon, Ga., is Engr.)

Ga., Metter.—City let contracts to construct \$10,000 electric-light system. (Noted in June to have engaged W. M. Crook, Grand Bldg., Macon, Ga., as engineer.)

Miss., Tchula.—City voted \$4600 bonds to construct electric-light system. W. W. Gwin, Mayor. (Noted in May as contemplating bond issue and receiving bids for construction.)

Mo., Ulrich.—City is reported as considering plans for rebuilding burned electric-light plant. Address The Mayor.

N. C., Dunn.—Town will install white way electric lighting; Gilbert C. White, Engr., Durham and Charlotte, N. C. (See Machinery Wanted—Iron Standards.)

Okl., Calvin.—City contemplates voting on granting franchise to Williams & Mann of Adamson, Okla., to supply electricity; if granted franchise, proposes to remove electric plant from Adamson to Calvin.

Okl., Miami.—City voted \$25,000 bonds to extend and improve electric-light and water systems. Address The Mayor. (Lately noted.)

Okl., Wynoka.—City votes Aug. 31 on bonds for improvements to include engine for power house, improvement of lighting and water system, etc. Address The Mayor.

S. C., Due West.—Due West Power & Light Co., capital \$1500, incptd. by W. W. Edwards, R. B. Brice, O. Y. Brownlee and S. A. Pressley.

Tenn., Trimble.—City will construct electric-light and power plant; issued \$5000 bonds. Address The Mayor.

Tex., Miami.—City retained Henry E. Elrod, Southwestern Life Bldg., Dallas, Tex., to plan and supervise construction of electric-light plant and water system; cost about \$25,000.

W. Va., Shepherdstown.—Shepherdstown Light & Water Co. (lately noted organized, etc.) buys Shepherdstown Electric Light & Power Co.; will build water system. (See Water-works.)

FLOUR, FEED AND MEAL MILLS

Ala., Empire.—Empire Coal Co. will build roller flour mill.

Ky., Frankfort.—Frankfort Milling Co. contemplates installing electrical equipment; now has steam plant.

La., New Orleans.—John T. Gibbons let all contracts for \$225,000 feed and grain plant; 5-story 145x50 ft. feed mill, 140x75 ft. grain elevator with capacity 250,000 bu. and 3-story 140x125 ft. grain storage warehouse; reinforced concrete construction with steel doors and windows; 200 tons mixed stock feed and 50 tons poultry feed daily; all equipment and grain handling machinery to have individual electric motor drives; electricity from New Orleans Railways Co.; Julius Koch, Gen. Contr.; E. R. Bartholomew, Supt.; both of New Orleans; equipment furnished through and installed by Kaucher, Hodges & Co., Memphis, Tenn. (Lately noted.)

Tex., Denton.—Alliance Milling Co. organized; J. C. Whaley, Pres.; John Alexander, V.P.-Mgr.; L. H. Brady, Secy.; has flour mill and grain elevator. (Lately noted incptd. with \$75,000 capital.)

Va., Clifton Forge.—Clifton Forge Milling & Feed Co., capital \$20,000, incptd.; W. G. Manley, Pres.; Lynchburg; John H. Davis, Secy.-Treas.

FOUNDRY AND MACHINE PLANTS

Ark., Yellville.—Foundry, etc.—Yellville Machine Shops & Foundry Co. will build 40x24-ft. foundry and 60x30-ft. machine shop building; open bids Aug. 25; install general machinery repair and boiler work equipment including lathes, drill presses, band saws, etc., costing \$5000. J. E. and Ross Lee (lately noted to build foundry) and E. R. Lee forms this company. (See Machinery Wanted—Engine; Iron Blocks.)

Fla., Jacksonville.—Engines, etc.—D. B. Sharp Machinery Co., capital \$2000, incptd. to manufacture gasoline and oil engines, air compressors, steam pumps, etc.; D. B. Sharp, Pres.; F. J. Brock, V.P.; R. B. Tupper, Secy.-Treas.

Fla., Jacksonville.—Machinery.—Franklin F. Davis, capital \$10,000, incptd.; Franklin F. Davis, Pres.-Treas.; Potter Palmer, V.P.; T. J. Hammill, Secy.

Ky., Louisville.—Plows.—Brinley-Hardy Co. contemplates changing from direct current (isolated station) to alternating current central station service; will purchase motors if change is made.

Tenn., Cleveland.—Iron and Steel Products, etc.—Dixie Foundry Co., capital \$10,000, incptd. by J. C. McKenzie, S. B. Rymer, F. J. Earle and others.

Tenn., Rockwood.—Stoves.—Rockwood Stove Works organized with Sewell Howard, Pres.; John Molyneux, V.P.; Harry Howard, Secy.-Treas.; all of Rockwood; J. F. James, Gen. Mgr., Chattanooga, Tenn.; receiving bids on erection of building; 200x100 ft.; also erect warehouse. (Lately noted incptd. with \$50,000 capital.)

Tex., San Antonio.—Farming Implements.—Pool Mfg. Co. of Britton, Okla., contemplates establishing plant to manufacture combined cotton chopper, planter and tiller.

GAS AND OIL ENTERPRISES

Ark., Newport.—Gas Plant.—Newport Water, Light & Power Co. plans to install plant to manufacture gas for heating and cooking; will apply for franchise.

Fla., Daytona.—Gas Plant.—Daytona Public Service Co. will install new water gas set to increase capacity; has purchased this equipment.

Fla., Kissimmee.—Kissimmee Oil Co., capital \$12,000, incptd.; C. W. Ward, Pres.; John M. Lee, V.P.; G. V. Tribbs, Secy.-Treas.

Fla., Tampa.—Coke Bin.—Tampa Gas Co. let contract McGucken & Hyer, Tampa, to erect coke bin; concrete; cost \$9600.

Ky., Barbourville.—Dixon Drilling Co., capital \$1000, incptd. by C. P. Kennedy, H. C. Bailey and John Dixon.

Ky., Frankfort.—Perry Oil Co., capital \$6000, incptd. by J. G. South, A. J. G. Wells, C. W. Hay and E. C. Walker.

Ky., Hazard.—East Kentucky Oil & Gas Co., capital \$10,000, incptd. by Austin Fields, R. F. Fields and Jas. Holliday.

N. C., Asheville.—Distributing Station.—The Texas Co. (main office, Houston, Tex.) purchased site 305x100 ft., on which to erect buildings to replace those destroyed by flood; reported new plant will be of greater capacity than old one; expend \$25,000; brick and concrete construction; Willard Thompson, Local Supt.

Okl., Cherokee.—Alfawata Oil & Gas Co., capital \$10,000, incptd. by C. Bradley and others.

Okl., Nowata.—Swiss Oil Co., capital \$10,000, incptd. by T. E. Speir and others.

Okl., Okmulgee.—Dixford Oil & Gas Co., capital \$32,000, incptd. by J. Belford and others.

Okl., Okmulgee.—Sinal Oil & Gas Co., capital \$15,000, incptd. by J. Belford and others.

Okl., Tulsa.—Elm Oil Co., capital \$300,000, incptd. by Thos. Chestnut, T. K. Smith and Chas. P. Quinlan.

Okl., Tulsa.—B. I. W. Oil & Gas Co., capital \$15,000, incptd. by W. F. Impey and others.

Okl., Tulsa.—Oil Refineries.—Cosden & Co. increased capital from \$4,200,000 to \$7,000,000; Cosden Oil & Gas Co. increased capital from \$8,500,000 to \$12,500,000.

Tex., El Paso.—Oil Refinery.—Robt. Ligon will build oil refinery; 1600x300 ft. site; brick or sheet-iron buildings.

Tex., Houston.—Houston Electric Oil Co., capital \$20,000, incptd. by C. P. Brokaw, C. W. Nugent and Thos. B. Lewis.

Tex., Humble.—Baxter Petroleum Co., capital \$60,000, incptd. by C. P. Hall, J. E. Webb and Prince Baxter.

Tex., Santa Anna.—Standard Oil Co., capital \$50,000, incptd. by Upton Henderson, Allison Weaver, B. A. Pessels and Fred W. Turner.

Va., Richmond.—Old Dominion Oil & Gas Co., capital \$300,000, incptd.; D. R. Creech, Pres.; W. P. Redd, Secy.-Treas.

W. Va., Omar.—West Virginia Oil, Gas & By-Products Co., capital \$50,000, incptd. by A. J. Dalton, John A. Kelly, W. L. Jones and others.

W. Va., Marne.—Gasoline.—Riverside Oil Co., Pittsburgh, Pa., will build gasoline plant and pipe-line system with daily capacity 500,000 cu. ft. gas; has contracted for casing-head (gasoline) natural gas from 15 Clay County oil wells of Chalmers Oil & Gas Co., 1517 Munsey Bldg., Baltimore, Md.; contract provides that Riverside corporation enlarge plant from time to time, with sufficient additional capacity to use all additional casing-head gas that may be produced by Chalmers corporation from wells now being drilled.

W. Va., Ritchie County.—Gasoline, etc.—Chalmers Oil & Gas Co., 1517 Munsey Bldg., Baltimore, Md., acquired 800 acres Clay district gas and oil land; will drill wells; build casing-head gasoline plant.

W. Va., Williamstown.—Lance Oil Co., capital \$25,000, incptd. by R. L. Bullman and E. A. Sweeney of Williamstown; G. E. Haymond of Marietta, Ohio, and others.

HYDRO-ELECTRIC PLANTS

Ga., Butler.—Butler Light Co. (J. A. and H. A. Childs) contemplates construction of dam at Little Mill site on Beaver Creek, and erection of hydro-electric plant. (Lately noted.)

N. C., Badin.—Carolina Power & Light Co., Raleigh, N. C., is reported to expend several million dollars to build hydro-electric plant on Yadkin River, 10 mi. below Badin.

N. C., Bridgewater.—Western Carolina Power Co., subsidiary of Southern Power Co., Charlotte, N. C., plans immediate construction for Bridgewater development; A. J. Twigg & Son, Augusta, Ga., wire Manufacturers Record: We have contract from Hardaway Contracting Co., Columbus, Ga., and Rinehart & Dennis Co., Charlottesville, Va., for Catawba end of Bridgewater development; 3,000,000 yds. earth fill dam; water side lined with stone, 100,000 yds.; 160 ft. high; 750 ft. wide at base; 1500 ft. long; approximate cost \$1,000,000, exclusive of all masonry, which is handled by Hardaway. (Contract let Hardaway and Rinehart & Dennis lately detailed as follows: To construct 3 dams requiring 4,500,000 yds. excavation, 50,000 yds. concrete, 40,000 yds. tunnel excavation and 100,000 yds. riprap; contract amounts to about \$2,000,000; contractors will use 10 steam shovel outfits and large masonry plant; dams across Catawba River at Bridgewater, Paddy Creek and Linville River; generate 26,000 H. P.; locate power-house below Linville River dam; these 3 dams will back up water about 6 mi.; released water to flow through Bridge-water plants, Lookout Shoals plant near Statesville, then through plants at Catawba, Fishing Creek, Great Falls and Rocky Creek; Bridgewater is Southern Power Co.'s sixth development, increasing its total to 170,000 H. P.)

N. C., Charlotte.—Southern Power Co. will repair flood-damaged hydro-electric plants on basis of latest high waters of Catawba River; may rebuild power-houses and elevate transmission towers.

W. Va., Welch.—Tug River Electric Co., capital \$700,000, incptd. by C. V. Updyke of Welch, C. S. Sledge, C. C. Moss and L. A. Osborne of Gary, W. Va.

ICE AND COLD-STORAGE PLANTS

La., Myrtle.—Chas. F. Rantz of New Orleans, La., will build ice factory with daily capacity 60 to 75 tons, at Myrtle Grove or Ollie.

Va., Narrows.—Clarence E. Hammer may install ice plant. (See Machinery Wanted—Ice Plant.)

Va., Staunton.—Augusta Cold Storage Co., capital \$200,000, incptd.; C. M. Ackerman, Pres.; E. W. Ackerman, Secy.-Treas.; both of New York.

LAND DEVELOPMENTS

Fla., Miami.—Coral Gables Plantation Products Corp., capital \$25,000, chartered; Geo. E. Merrick, Pres.-Treas.; A. F. Merrick, V.P.; R. W. McLendon, Secy.

Fla., Middleburg.—Southern Plantation Corp., capitalization \$500,000, incptd. to de-

velop 10,000 acres farm land; W. S. Jennings, Pres.; F. L. Bryan, Secy.; J. W. Busard, Gen. Mgr.

Fla., Ocoee.—Marshall Farms, capital \$30,000, incptd.; J. I. Marshall, Pres.; G. W. Andrews, Secy.; V. S. Holden, Treas.

Fla., Sarasota.—City votes Sept. 5 on \$30,000 bonds to purchase site for park. Harry L. Higel, Mayor.

La., New Orleans.—Louisiana Development Co. organized with C. J. Capdevielle, Pres.; Oscar Schumery, Sr., V.P.; W. E. Lovejoy, Secy.-Treas.; will develop several large tracts lands in Gentilly Road section; divide into lots, construct streets, etc.

Md., Ocean City.—Atlantic Realty Co., 206 N. Calvert St., Baltimore, purchased 5022 additional acres land 5 mi. south of Ocean City, giving it about 15 mi. ocean frontage; proposes construction of sewer system, boardwalk, bungalows, cottages and possibly hotel; Worcester County Commrs., Snow Hill, Md., will construct bridge from mainland to Sandy Point, at northern end of company's land.

LUMBER MANUFACTURING

Ga., Camak.—Shortleaf Pine Co., capital \$12,000, incptd. by W. S. Wilson (Pres.), D. O. McBrayer, W. B. Whiteside and others; acquired timber land between St. Clair and Camak; will cut timber and ship to Camak.

Ky., Lexington.—Forest Lumber Co. (lately noted incptd., capital \$10,000) organized; S. E. Patten, Pres. and Mgr.; Roy Patten, V.P.; Jessie Patten, Treas.; will let contract to erect wood structure, with sprinkler system; install equipment with daily capacity 25,000 ft. walnut, white oak, poplar, ash, etc. (See Machinery Wanted—Sawmill Equipment.)

N. C., Goldsboro.—Virginia Box & Lumber Co. will build plant; 24-acre tract; saw mill to have daily capacity 75,000 ft.; mill with daily capacity of 20,000 ft.

Okl., Bismarck.—Choctaw Lumber Co. (Dierks Lumber & Coal Co., Herbert Dierks, Mgr., Mfg. Dept., Kansas City, Mo.) let contract to L. Moore Drykiln Co., Jacksonville, Fla., for iron equipment for 8 rooms to replace kilns noted burned.

Va., Grottoes.—Virginia-Maryland Lumber Co., capital \$25,000, incptd.; D. E. Ham, Pres.; Grottoes; S. E. Foster, Secy.-Treas., Fredericksburg, Va.

W. Va., Wardsville.—Lost River Lumber Co. plans to develop development of timber land; W. B. Cornwell, Pres., Romney, W. Va., advises Manufacturers Record: Own 30,000 acres virgin timber on Great Capon and Lost rivers, extending into Hardy and Hampshire counties; our plan is to build railroad into this vicinity and sell timber units; this company will not engage in operating, except to a limited extent. (Lately noted as understood to be planning development of 30,000 acres.)

METAL-WORKING PLANTS

Md., Baltimore.—Tubing, etc.—Baltimore Tube Co. will build 351x63-ft. plant addition to plant at Wicomico and Bayard Sts.; let contract to West Construction Co., Knickerbocker Bldg., Baltimore.

Md., Havre de Grace.—Crossies.—Maryland Metal Cross Tie Co., 627 Munsey Bldg., Baltimore, retained Thornton W. Price, Woolworth Bldg., New York, as Engr.-Arch. for plant; 600x200 ft. fireproof construction building costing \$200,000; install open hearth furnaces, molding machines, conveyors, and mixers, electric cranes, etc.; daily capacity (of first unit) 1500 cast-steel cross ties, etc. (Previously noted organized, etc.; A. F. Brown, Havre de Grace, is Pres.-Mgr.)

MINING

Ala., Pyriton.—Graphite.—Southern Star Graphite Co., capital \$50,000, incptd. by Geo. G. Montz, 27 Stoecker Ave.; E. D. Noe, Frank A. Collier and others, all of Louisville, Ky.; build 400 tons daily capacity mill for recovery of graphite; cost \$40,000; electric power; equipment to include crushers, dryers, dynamos, etc., as lately stated. (Recently noted to build and inviting proposals for this graphite plant.)

Ark., Argenta.—Sand.—Southern Sand Co., capital \$15,000, incptd. by Mord Roberts of Argenta, N. C. Dunn of Oxford, Kans., and others; has plant; reported to install additional machinery, doubling capacity.

Ga., Chatsworth.—Talc.—Georgia Talc Co., Asheville, N. C., will add some separating machinery; later plans construction additional buildings by own force.

Mo., Granby-Lead and Zinc.—American Zinc, Lead & Smelting Co. will build concentrating plant; capacity 300 tons or more.

Mo., Springfield-Lead and Zinc.—Hazel Dell Mining Co., capital \$16,000, incptd. by H. D. Baker, W. H. Butler and E. L. Goss.

Okla., Miami.—Buffalo Mining Co., capital \$125,000, incptd. by S. Walker, V. V. Grant and C. V. Warner.

Okla., Miami.—Sheridan Mining Co., contemplates erecting mill.

Okla., Oklahoma City.—Island Mining Co., capital \$12,000, incptd. by Nash A. Swetzer, K. Cavett and Eula A. Latham of Oklahoma City, and T. M. Latham of Guyton, Okla.

S. C., Columbia.—Granite.—United Granite Co., capital \$2000, incptd. by C. T. Graydon, G. P. Logan and Seberino Aja.

Tenn., Knoxville.—Chaska Mining Co., capital \$10,000, incptd. by J. K. Griffin, W. R. Griffin, S. T. Buffatt and others.

Tenn., Liberty.—Zinc, etc.—Nebraska Mining Co. is reported to have leased Dry Creek zinc, lead and silver mines.

MISCELLANEOUS CONSTRUCTION

Ala., Mobile.—Dock Repairing.—City Com. let contract Jett-Muths Construction Co. at \$2315 to repair apron of docks; this contract does not include decking for docks which will be replaced by employees of street department.

Fla., Clearwater.—Dock.—City let contract Mutual Co. to construct dock at North Park; width, 6 ft.; railing on each side; concrete piles; W. S. Gregory, City Clerk. (Lately noted inviting bids.)

Fla., West Palm Beach.—Palm Beach County Comrs. ordered vote Aug. 15 on \$200,000 bonds for dredging West Palm Beach inlet to depth of 20 ft.; also construct 20-acre basin in Lake Worth as part of project.

N. C., Beaufort.—Seawall.—Town Comrs. voted to issue \$10,000 bonds to construct seawall along Front St. (Lately noted.)

Tenn., Chattanooga.—Wharf.—Ed. Bass, City Commr., will submit proposition to change original plans prepared by Robt. Hooke, City Engr., for municipal wharf; Commr. Bass proposes to build warehouse back from water's edge, construct extension to proposed railroad track onto elevated trestle and use crane in loading and unloading of river craft; original plans called for erection of warehouse at water's edge; \$100,000 appropriated.

MISCELLANEOUS ENTERPRISES

Ala., Attalla.—Laundry.—W. E. Robinson may establish steam laundry. (See Machinery Wanted—Laundry Machinery.)

Ala., Birmingham.—Contracting.—Newell Contracting Co., capital \$50,000, incptd. by A. T. Newell, Prest.-Treas.; S. S. Newell, V.-P. and Secy.

Ala., Mobile.—Publishing.—Tribune Publishing Co., capital \$10,000, organized with John C. O'Connell, Prest.; Vic. Calvert, V.-P. and Managing Editor; Orlyn Dorgan, Secy.-Treas.

Ark., Stuttgart.—Grain Elevator.—C. G. McDougal of Chicago will build \$10,000 rice elevator and granary.

Fla., Lakeland.—Publishing.—Florida Methodist Publishing Co., capital \$5000, incptd. by W. Viske Johnson, Prest.; L. D. Lowe, 1st V.-P.; T. J. Fraley, 2d V.-P.; J. Edgar Wilson, Secy.-Treas.

Fla., Miami.—Distilled Water.—J. M. Green will erect distilled water bottling plant; concrete and sheet iron; 50x100 ft.

Fla., Milton.—Laundry.—S. G. Collins may establish steam laundry. (See Machinery Wanted—Laundry Machinery.)

Ky., Mt. Sterling.—Transportation.—Mt. Sterling & Lexington Transportation Co., capital \$1500, incptd. by Robt. Stone and H. M. Wyatt of Mt. Sterling, and N. H. Stone of Sharpsburg, Ky.

La., New Orleans.—Grain Elevator.—John T. Gibbons will build 250,000-bu. grain elevator with warehouse and feed mill; has awarded all contracts. (See Flour, Feed and Meal Mills.)

Miss., Meridian.—Construction.—Standard Construction Co., capital \$10,000, incptd. by John Hickory Semmes, C. H. Dabbs and C. C. Miller.

Mo., Kansas City.—Greenhouse.—Rose M. Fisher and Emma J. Palmer of Holden, Mo., will build greenhouse.

N. C., Catawba.—Ferry.—Catawba-Statesville Ferry Co., incptd. by C. B. Ruffy, F. Y. Long, J. J. Smith and others.

N. C., Charlotte.—Ferry.—Catawba Ferry Co., capital \$25,000, incptd. by John M. Por-

ter, John F. Boyd and M. M. Shutz; operate ferry at Sioans Ferry, Mt. Holly and Rozzell.

N. C., Newbern.—Tobacco Redrying.—Newbern Redrying Tobacco Co., W. L. Lewis, Prest., let contract Rhodes & Underwood of Newbern to erect tobacco redrying plant; 130x60 ft.; brick. (Lately noted.)

S. S., Lake City.—Laundry.—C. D. Hyatt may establish steam laundry. (See Machinery Wanted—Laundry Machinery.)

Va., Hopewell.—Publishing.—Hopewell Herald, capital \$25,000, incptd.; D. L. Elder, Prest.; W. H. Daniel, Secy.

W. Va., Williamson.—Express.—Mingo Express Co., capital \$5000, incptd. by Jerome Robinson, Glipsa Vanhoose, Henderson Hale and others.

MISCELLANEOUS FACTORIES

Fla., Hosford.—Bottling.—Hosford Coca-Cola Bottling Co., capital \$10,000, incptd.; T. C. Parker, Prest.; R. I. Stephens, V.-P.; D. R. King, Secy.-Treas.

Fla., Jacksonville.—Perfume.—Southland Perfume Co., capital \$25,000, incptd.; L. F. Ducker, Prest.; W. O. Brock, Secy.; W. R. Sargent, V.-P. and Treas.

Fla., Jacksonville.—Walsts.—M. Kussner, 118 Laura St. (lately noted to establish factory) will manufacture walsts; installed 10 machines and may increase to 100. (See Machinery Wanted—Textile Products.)

Fla., Pensacola.—Shipyards.—Pensacola Maritime Corp., capital \$25,000, incptd. by Wm. H. Knowles, Henry M. Yonge and Ellis Knowles.

Ky., Owensboro.—Medicine.—Ru-Mo-Lax Co., capital \$30,000, incptd. by W. M. Rawls, W. K. Miller and Frank C. Malin.

Ky., Louisville.—Novelties.—Novelty Mfg. Co., capital \$5000, incptd. by M. C. Stemlen, M. C. Fullenlove and B. F. Gardner.

Ky., Louisville.—Distillery.—Rugby Distillery Co., capital \$50,000, incptd. by Wm. Ruedeman, E. M. Babbitt and Henry Ruedeman.

Md., Asbestos.—Roofing, etc.—Baltimore Roofing & Asbestos Co. will erect 2 additional buildings; 1 story, 400x50-ft., mill construction, steel and concrete, permitting rearrangement of certain manufacturing departments now in other buildings, with enlargements in old and new structures; 2 story, 70x50-ft., steel and concrete structure for office building, permitting removal of offices from main building; plans and construction by company; all material purchased. (Supersedes recent item under Baltimore.)

Md., Baltimore.—Controllers.—Monitor Controller Co., 111 S. Gay St., will remove factory to 500-516 E. Lombard St., obtaining more floor space.

Md., Baltimore.—Paint.—H. B. Davis Co., 407 Keyser Bldg., let contract Clarence W. Stubbs, Equitable Bldg., to erect 4 additional units to plant at Keyser and Bayard Sts.; tank structure, 28x50 ft.; oilhouse and furnace, 22x48 ft.; 2 buildings, each 24x48 ft., for reducing-house and gum building, respectively; brick and reinforced concrete construction; J. E. Moxley, Jr., Archt., 531 N. Calhoun St., Baltimore. (Noted in June.)

Md., Baltimore.—International Products Co. incptd. with \$15,000,000 capital stock; directors, Henry L. Hunt, Henry Edward Brockway, each of 25 Bond St., and Henry H. Hanson, 17 Battery Pl., all of New York; Edw. P. Hill, resident agent, 1304 Continental Bldg., Baltimore. Mr. Hunt advises New York representative of Manufacturers Record that plans are not ready for announcement.

Md., Baltimore.—Clothing.—Tilly Company has leased building at 214 Fairmount Ave.; will equip to manufacture clothing.

Md., Baltimore.—Straw Hats.—Townsend-Grace Co., capital \$750,000, incptd. by Wm. S. Townsend, Jno. W. Grace and Geo. R. Willis; continue established straw-hat factory (Townsend, Grace & Co.) at 209-211 W. Fayette St.

Mo., Joplin.—Dynamite.—General Explosives Co., capital \$50,000, incptd.; E. Wm. Hawley, Prest., St. Louis; W. W. Edwards, V.-P., New York; Albert J. Rawlings, Secy., Chicago; offices at 2035 Railway Exchange Bldg., St. Louis; will build plant to manufacture dynamite; 70 buildings; iron, cement blocks and wood; 25x25-ft. explosives buildings; 100x40-ft. warehouse. Mr. Rawlings, registered at Connor Hotel, Joplin, will manage Joplin offices.

Mo., St. Louis.—Lighting Fixtures.—Reflectolite Co. organized; capital stock \$50,000; Frank Adam, Prest.-Treas.; C. F. Beute, V.-P.; H. C. Adam, Secy.-Mgr.; has plant in fireproof building; manufacture lighting

fixtures; 914 Pine St. (Lately noted incptd., etc.)

Mo., St. Louis.—Paper Boxes.—Engel Paper Box Specialty Co., capital \$15,000, incptd. by L. A. Engel, C. C. Engel and W. W. Stroop.

Mo., St. Louis.—Automobile Springs.—Champion Auto Spring Co., capital \$5000, incptd. by Thos. J. Ryan, J. W. H. Sasse and Walter B. Donnell.

Mo., St. Louis.—Oil and Gas Burners.—Reliance Oil & Gas Burner Co., capital \$300,000, incptd. by Julius F. Hauke, H. L. Maisch, Wm. F. Donahue and others.

N. C., Charlotte.—Push Buttons.—W. J. Cook, Supt. of Realty Bldg., patented push button; will contract for manufacture. (See Machinery Wanted—Push Buttons.)

N. C., Elizabeth City.—Ladies' Apparel.—O. F. Gilbert will establish plant to manufacture ladies' suits, coats and skirts; purchased 3 sewing machines equipped with electric motors; leased second floor of Bee Hive.

N. C., Hendersonville.—Drugs.—Mutual Drug & Mfg. Co., capital \$100,000, incptd. by W. F. Bradburn, B. Shock and M. S. Johnston.

N. C., Kinston.—Thermostat.—Electrical Thermostat Co., capital \$10,000, incptd. by R. L. Johnston, H. E. Shaw, Fred Sutton and others.

N. C., Wilmington.—Bakery.—W. T. Farris, 121 S. Front St., let contract Rhodes & Underwood of Wilmington to erect addition to bakery; install additional equipment, including cake oven and moulding machine with capacity 600 rolls per min.

Okla., Tulsa.—Packer.—Robinson Packer Co. is reported to establish plant.

Tenn., Nashville.—Drykiln.—Tennessee Extract Co. will erect 3-story drykiln at 1417 69th Ave.; cost \$11,000.

Tex., Sherman.—Overalls.—J. H. Wood and R. A. Chapman will erect building for Sherman Overall Mfg. Co.; structure to be 2 stories, 61x140 ft., brick, fireproof; S. B. Elliott, Archt., receives bids until Aug. 19; plans from Archt. for \$10. (Supersedes recent item.)

Va., Claremont.—Old Mansion Products Co., capital \$30,000, incptd.; H. C. Burdick, Prest.; W. S. Burt, Secy.

Va., Newport News.—Shoe Repairing.—Howard W. Poole Electrical Shoe Repairing Co., capital \$10,000, incptd.; Howard W. Poole, Prest.; J. F. Smith, V.-P.; W. B. Howard, Secy.-Treas.

Va., Richmond.—Paper Boxes.—Randolph Paper Box Co. will repair brick building; cost \$5000.

Va., Richmond.—Bakery.—Ward Baking Co. of Virginia, capital \$3000, incptd.; Geo. Bryan, Prest.; M. G. Wallace, Secy.-Treas.; branch of Ward Baking Co., Southern Blvd. and East 143d St., New York.

Va., South Boston.—Bottling.—Boston Christo Cola Co., capital \$10,000, incptd.; J. N. Bane, Prest.; J. S. Bane, Secy.-Treas.

W. Va., Huntington.—Ultramarine.—Standard Ultramarine Co., Fifth Av. and 21st St., will erect addition to double capacity.

W. Va., Huntington.—Soda Ash.—Ohio Valley Alkali Co., capital \$350,000, incptd. by H. E. Marble, F. Mayer, A. C. Rolges and N. H. Maxwell of Cincinnati, Ohio, and P. Barton of Norwood, Ohio; build \$300,000 plant to manufacture soda ash used in manufacturing glass; has flowing salt well for raw material; output for Glass Brick Co., now completing plant material; Glass Brick Co. (of which Ohio Valley Alkali Co. is subsidiary) will consume product.

MOTORS AND GARAGES

Ark., Arkansas City.—Automobiles.—McNeely Motors Co., capital \$10,000, incptd. by T. B. McNeely, W. J. Massey and F. M. Rogers.

Ark., Morrilton.—Garage.—A. A. Lachowsky will build 40x25-ft. garage; brick construction; also another 40x25-ft. steel-clad building.

Fla., Daytona.—Garage.—A. McF. Porter let contract Hawley & Hazens to erect garage; brick and concrete; 50x150 ft.; metal roof.

Fla., Jacksonville.—Automobile Line.—Yellow Taxi Service, capital \$5000, incptd.; Anthony Vignola, Prest.; C. E. Linn, V.-P.; Nicholas Leon, Secy.-Treas.

Ga., Columbus.—Garage.—Wm. Heard will remodel building as garage and repair shop; install elevator; cost \$7500 to \$10,000.

Ga., Thomasville.—Automobiles.—Logan Trading Co., capital \$5000, incptd. by W. A. Logan, Roscoe Luke, C. E. Hay and Louis Moore.

Ky., Mt. Sterling.—Automobile Line.—Mt.

Sterling & Lexington Transportation Co., capital \$1500, incptd. by R. B. Stone and H. M. Wyatt.

N. C., Laurinburg.—Garage.—D. C. Odom let contract W. D. Tucker to erect garage; brick; 50x150 ft.

N. C., Scotland Neck.—Garage.—N. A. Riddick Motor Car Co. plans to erect garage.

Okla., Oklahoma City.—Automobiles.—Reneau Motor Car Co., capital \$15,000, incptd. by H. W. Reneau and others.

Okla., Enid.—Garage.—Arenz Bros. let contract to Weller & Reardon to erect \$5000 building, to be occupied by carriage and automobile company, Ed. A. Myers, City Bldg., interested. (See Woodworking Plants.)

Okla., Tulsa.—Garage.—Westerman Motor Car Co., Jos. E. Washington, V.-P., will build 1-story 140x75-ft. fireproof construction garage costing \$17,000; Beers Construction Co., Contr.; Rush, Endacott & Rush, Archts.; both firms of Tulsa. (Jos. E. Washington lately noted to build garage.)

S. C., Newberry.—Automobiles.—Carolina Auto Co., capital \$10,000, incptd. by C. T. Summer and J. W. Smith, Jr.

Tenn., Memphis.—Garage.—H. A. White Auto Co. will erect building at 1648 Union Ave.; stone and brick; 8 rooms; install steam heating equipment; cost \$5000.

Tex., Waco.—Automobiles.—Herrick & McLarty Auto Co., capital \$30,000, incptd. by F. E. McLarty, T. D. Humphrey and J. W. Simpson.

Va., Pocahontas.—Automobiles.—Southwest Motor Car Co., capital \$5000, incptd.; W. K. Maxey, Prest.; J. R. Black, Secy. and Treas.

Va., Washington.—Automobile Line.—Rappahannock Jitney Bus Co., capital \$5000, incptd.; J. Edward Thornton, Prest.; Alice Clark, Secy.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

La., Monroe.—St. Louis, Iron Mountain & Southern Ry., E. A. Hadley, Ch. Engr., St. Louis, Mo., will expend \$142,000 to erect 15-stall roundhouse, machine and boiler shops, car repair shed, turntable, storehouse, mechanical coal chute and water plant; new yard to have capacity 1300 cars; Mr. Hadley advises Manufacturers Record: Plans have not progressed beyond preliminary stage. (Noted in Jan.)

Okla., Sapulpa.—St. Louis & San Francisco R. R., V. K. Hendricks, Engr., St. Louis, Mo., is reported to expend \$450,000 in improvements to include 38-stall roundhouse, machine shops and trackage.

ROAD AND STREET WORK

Ark., Batesville.—City will pave portion of Chestnut and Main Sts. Address The Mayor.

Ala., Birmingham.—Jefferson County Board of Revenue postponed date of opening bids until Sept. 11 to construct Wylam-Mulga-Warrior River Rd.; Geo. H. Clark, County Engr.; supersedes recent item. (See Machinery Wanted—Road Construction.)

Ark., Paragould.—Comms. Improvement Dist. No. 2, R. W. Meriwether, Prest., let contract Kaw Paving Co., Topeka, Kans., to construct 10,000 sq. yds. concrete and asphalt street paving, including curb and gutter; cost \$25,000; W. R. Haegler & Son, Engrs., Potosi, Mo. (Lately noted inviting bids calling for 9000 lin. ft. combination concrete curb and gutter, 10 concrete catch basins and 1500 ft. 10, 15 and 18-in. vitrified drainage pipe.)

Ark., Conway.—City will pave 1 block of Van Runkle St. Address The Mayor.

Ark., Siloam Springs.—Chas. N. Haskell, New York, is reported to construct highway through Wagoner, Cherokee and Adair counties to Oklahoma State boundary.

Ark., Stuttgart.—Comms. Street Improvement Dist. No. 5, C. D. Conrey, Secy., let contract M. J. Cole, Jr., Little Rock, to pave streets; 22,617 sq. yds. pavement, 18,007 lin. ft. concave gutter and 1276 lin. ft. combined curb and gutter; Towl Engineering Co., Engr., Pettit Bldg., Stuttgart. (Lately noted inviting bids.)

Fla., Arcadia.—City votes Aug. 29 on \$145,000 bonds, as follows: \$90,000 street improvements, \$21,000 sanitary sewers, \$19,000 waterworks extension, \$15,000 city hall; on all street improvements property-owners will pay two-thirds of cost, making total expenditure about \$275,000; let tentative contracts (subject to bond issue) aggregating \$234,576.79 as follows: Stidman & Hughes, Limestone, Fla., at \$145,336.40, for grading, foundations, asphalt concrete paving and concrete bridges; Fargo Construction Co., Jack-

sonville, at \$50,650, concrete curb, gutters and headers; Florida National Vault Co., Lakeland, Fla., at \$20,024.30 and \$18,807, respectively, sewer and water pipe extensions; Cravens & Kimmel, Engrs., Parker Bldg., Arcadia. (Lately noted inviting bids calling for 158,000 sq. yds. street paving, with curb and gutter, etc.; also 2 reinforced concrete bridges, 18-ft. span.)

Fla., Arcadia.—De Soto County Comms. let contract W. P. Kennedy Construction Co., Tampa, at \$100,000 to construct 25 mi. road with 2-in. asphalt surface and 6-in. clay base, and to Edwards Construction Co., Tampa, at \$150,000 to construct 35 mi. roads; A. L. Durrance, Clerk County Comms. (Lately invited bids.)

Fla., Port Pierce.—City let contracts totaling \$16,000, as follows: J. G. Coats Co. at \$12,000 for grading, paving and asphaltizing, and to C. G. Lueckel at \$2800 for curb and sidewalk construction; both contractors of Port Pierce; Coats Co.'s contract calls for rock-asphalt pavement, penetration method, on sections of Pine St., Palmetto Ave. and Orange Ave., and hard surface and curbs along sections of Seminole Ave., Ridge St. and Selene St.; Mr. Lueckel's contract involves 666 sq. yds. cement sidewalks and 8339 lin. ft. curbing along various streets. (Noted in June.)

Fla., Blountstown.—Calhoun County Commissioners ordered vote Aug. 15 on \$130,000 bonds to construct roads.

Fla., Key West.—Monroe County Comms. will order election to vote on \$125,000 bonds to construct roads on Florida Keys; W. W. Ward and A. K. Smith of Biscayne Construction Co., Miami, made survey of route and estimate cost as follows: Road on Pine Key, \$9000; Key Largo, \$46,000; Cape Sable, \$66,000; Stock Island, \$5000.

Fla., Lake Wales.—City and Lake Wales Land Co. contemplate construction of several mi. sheet asphalt pavement; plans being prepared by H. S. Jaudon Engineering Co. of Atlanta and Savannah, Ga., and Box 384, Bartow, Fla. (latter address for this work). Address The Mayor and Lake Wales Land Co.

Fla., Lakeland.—City will arrange with Polk County Comms., Bartow, Fla., for paving 5 mi. of streets to connect with county roads provided for in bond issue.

Fla., Tarpon Springs.—City let contract Edwards Construction Co., Tampa, to pave Anclote St., from Athens to Cross St.; Bath, from Spring Blvd. to Lime Sts.; Banana, from Lemon to Lime Sts., and Lime, from Shaddock to Banana Sts.; macadam and asphalt, and with exception of Anclote St., to be 18 ft. wide with cement concrete curbing; Anclote St. to be paved for 700 ft. and curbed with granite. (Lately invited bids.)

Ga., Fort Valley.—City voted July 29 on \$15,000 bonds to pave streets. Address The Mayor.

Ga., Gainesville.—City let contract Preston-Small Construction Co., Macon, Ga., for 20,000 sq. yds. concrete paving on Spring, Grove and Broad Sts.

Ga., Monticello.—City plans 2 mi. or more cement sidewalk construction; invites bids; address The Mayor. (See Machinery Wanted—Paving.)

Ky., Hopkinsville.—Christian County Comms. award to Montgomery, Perkins & Co., San Antonio, Tex., for 86 mi. road construction involved 6 contracts; total \$208,277.88, with certain changes reducing amount to \$198,620; Clarksville Rd., 16 mi., \$27,674.88; Lafayette Rd., 21 mi., \$34,259; Fairview Rd., 10 mi., \$17,499.66; Madisonville Rd., 18 mi., \$61,486; Nashville Rd., 11 mi., \$28,021.56; Princeton Rd., 10 mi., \$39,236.82; Chas. Folsom, Engr. (Lately noted letting \$198,620 contract to Montgomery, Perkins & Co.)

Ky., Lexington.—City Comms. let contract F. T. Justice & Co., Lexington, to construct 6000 sq. ft. concrete sidewalks in Woodland Park and 2400 sq. ft. on South Upper St., in front of Seovell Park.

Ky., Wickliffe.—Ballard County Comms. will expend \$303,000 to construct about 100 mi. gravel roads and bridges; let contracts to Gene Scamaborn, Rockport, Ind.; Cresap Bros., Humboldt, Tenn.; West Kentucky Construction Co., Bardwell, Ky., and R. L. Frazer, La Center, Ky.; R. L. Briney, Engr., La Center, Ky.; G. O. Johnson, County Clerk. (Lately noted inviting bids to construct 28.39 mi. gravel roads, including 77,000 cu. yds. earth excavation, 97,000 cu. yds. gravel for surfacing, etc.)

La., Colfax.—Grant Parish Police Jury ordered election in Ward 3 to vote on tax to construct and maintain roads.

La., Houma.—Terrebonne Parish Police Jury, J. L. Caillouet, Prest., let contract

J. N. George & Sons, Shreveport and Baton Rouge, La., to construct road from Houma to Lafourche Parish line along Bayou Terrebonne, and to Alexandria Gravel Co., Alexandria, La., to furnish gravel; Lafourche Parish Police Jury, Thibodaux, La., has contracted to complete road through Lafourche Parish to Thibodaux; road from Houma to Lafourche Parish line will be 12 mi.; gravel surfacing; work involves 19,000 cu. yds. sand clay; 23,000 cu. yds. earth; \$51,000 available; J. B. Smith, Engr., Houma.

La., Lake Charles.—City let contract De Jersey & Naff, Opelousas, La., to pave Lawrence St., from Ryan St. to bank of lake; 5-in. concrete base; 1½-in. sand cushion; 3-in. vertical fiber brick, grout filler; 4700 sq. yds.; G. L. Rilling, Mayor; E. L. Gorham, City Engr. (Lately noted inviting bids.)

La., Rayville.—Richland Parish votes Sept. 16 on issuing \$130,000 bonds to construct gravel roads and concrete bridges. Theo. J. Coenen, Chrmn. of Com. (Supersedes recent item.)

La., Monroe.—Ouachita Parish Police Jury appointed Jas. W. Billingsley, Const. Engr., Interstate Bank Bldg., New Orleans, to supervise construction of highways; Engineer advises Manufacturers Record: Roads will lie in east half of parish as comprised by road districts 1 and 2; each district under direction supervising committee; Carl McHenry, Chrmn. Road Dist. No. 1; T. P. Flournoy, Chrmn. Road Dist. No. 2; each district issue \$250,000 bonds. (Lately voted bonds.)

La., Thibodaux.—Lafourche Parish Police Jury will construct road through Lafourche Parish to Thibodaux, connecting with road to be built by Terrebonne Parish. (See La., Houma.)

La., Thibodaux.—Highway Dept. Board of State Engrs. of Louisiana, Room 104, New Orleans Court Bldg., New Orleans, receive bids until Aug. 7 to construct Des Allemands-Raceland section of New Orleans-Houma Highway, about 10 mi. in Lafourche Parish; W. E. Atkinson, State Highway Engr., New Orleans. (See Machinery Wanted—Road Construction.)

Md., Baltimore.—City let contract Baltimore Asphalt Block & Tile Co., Monroe and Lorman Sts., Baltimore, at \$120,323.50 to pave sections of Calvert, Monument and Light Sts. and Linden Ave.; also to P. Reddington and Sons, 321 St. Paul St., Baltimore, 2 contracts at \$18,476.30 and \$6583.02, respectively, streets to include Hamilton, Mulberry and Pleasant Sts. and Norris alley. (Lately noted inviting bids.)

Md., Cumberland.—City will repave Baltimore St. from B. & O. R. R. to Park St.; repave South Centre St. from Harrison to Williams St., and pave Flat St. from B. & O. R. R. to Allegany St.; total 4900 sq. yds. brick pavement on concrete base, etc.; bids until Aug. 11; Ralph L. Rizer, City Engr. (See Machinery Wanted—Paving.)

Md., Frostburg.—City will grade and pave Bowers St.; 1500 ft.; Street Com. receives bids until Aug. 5; Wm. Harvey, City Engr. (See Machinery Wanted—Paving.)

Md., Rockville.—Montgomery County Commissioners let contract Brown & Gaskins of Baltimore at \$30,000 to reconstruct 5½ mi. road from Norbeck to ½ mi. from Redland; Legislature authorized \$25,000 bond issue.

Miss., Ackerman.—Choctaw County voted on \$25,000 bonds to construct roads. Address County Supvs.

Miss., Meridian.—City will construct pavement, curbs and gutters on 8th St. from 35th to 38th Aves., 5th St. from 27th Ave. to 6th St., 24th Ave. from 5th to 7th St. and 15th Ave. from 6th to 14th St.; bids until Aug. 8; R. L. Blanks, City Clk. (See Machinery Wanted—Paving.)

Miss., Pontotoc.—City will improve 3 mi. streets, about 6 mi. curb and gutter, storm drainage and inlets, etc.; 40,000 sq. yds. asphalt macadam, penetration method; bids until Aug. 10; Jos. P. Carey, Engr. (See Machinery Wanted—Paving.)

Miss., Tebula.—City voted \$5000 bonds to construct and pave sidewalks and construct sewer system. W. W. Gwin, Mayor. (Noted in May as contemplating bond issue and receiving bids for construction.)

Miss., West Point.—Clay County Supvs., L. J. Howard, Clerk, plan to issue \$30,000 bonds for road and bridge construction.

Miss., Winona.—Montgomery County Commissioners let contract at \$70,000 to construct 15 mi. including grading, graveling and pipe-laying; Snowden & Hauser, Engrs., Jackson and Columbia, Miss. (Lately noted inviting bids.)

Miss., Yazoo City.—Yazoo County, Beats Nos. 3 and 5, will construct 4 mi. Panther

Creek Highway from north end of bridge over Triune Lake; Yazoo County Supvs., S. S. Griffin, Clerk, receive bids until Aug. 7. (See Machinery Wanted—Road Construction.)

Mo., Joplin.—City Com. will pave South Main St., from 10th to 20th Sts., with 4-in. vertical fiber brick; cost to property owners, \$30,138.50.

N. C., Albemarle.—Town Council, M. J. Harris, Mayor, has plans and specifications for street paving lately noted; 25,000 sq. yds. with alternative bids upon 50,000 sq. yds.; specifications cover sheet asphalt, bituminous concrete, brick and durax blocks, etc.; work includes grading, granite curbs, vitrified brick and concrete sewers, concrete curb and gutter, and storm drains; bids until Aug. 15; plans, etc., at office of Town Clerk and of Anderson & Christie, Engrs., Charlotte, N. C. (See Machinery Wanted—Paving.)

N. C., Beaufort.—Town contemplates voting on \$75,000 bonds for street improvements, sewer system and water-works. Address Town Clerk.

N. C., Louisburg.—Franklin County will construct 25 to 30 mi. sand clay roads in Cedar Rock Township; bids until July 31; Robt. L. James, Civil Engr., R. F. D. No. 4, Louisburg. (See Machinery Wanted—Road Construction.)

N. C., Beaufort.—Road Comms. Hunting Quarter Township, Carteret County, J. O. Mason, Chrmn., Stacy, N. C., will construct ½ mi. of road; bids until Aug. 21. (See Machinery Wanted—Road Construction.)

N. C., Warsaw.—City will macadamize Main St. and construct concrete sidewalks; has \$5000 bonds available for street improvements. Address The Mayor.

Okla., Durant.—Bryan County, Bennington Dist., issued \$25,000 bonds to improve roads. Address County Comms.

Tenn., Benton.—Mountain Road Com. of Polk County (lately noted voting \$95,000 road bonds), C. P. Williams, Res. Engr., Wetmore, Tenn., will build 18½ mi. highway across Little Frog Mountain; invites bids; subject to bond sale. (See Machinery Wanted—Road Construction.)

Tenn., Centerville.—Hickman County Commissioners ordered vote Sept. 14 on \$225,000 bonds to construct roads. (Lately noted.)

Tenn., Decaturville.—Decatur County Commissioners ordered vote Sept. 2 on bonds to construct roads.

Tenn., Kingsport.—Kingsport Improvement Co. will construct 5 mi. concrete sidewalks; soon let contract.

Tenn., Lenoir City.—City has plans and specifications for proposed street improvements; 30,000 sq. yds. paving, 28,000 cu. yds. grading, 20,000 lin. ft. curbing, 6000 sq. yds. guttering and 10,000 lin. ft. sewerage; for Improvement Dist. No. 1, 2, 3 and 4; bids on both concrete and concrete asphalt paving; proposals until Aug. 11; plans and specifications at City Hall; H. N. Curd, Mayor. (See Machinery Wanted—Paving.)

Tenn., Memphis.—Memphis Street Ry. Co. will repave with wood block its share of Main St. and Front St., from Monroe to North Court Sts.; cost \$27,461.

Tenn., Selmer.—City let contract D. T. Smith of Selmer to construct 24,000 ft. concrete sidewalks.

Tenn., Wartrace.—Wartrace-Fairfield Turnpike Co., capital \$4000, inceptd. by H. F. Brown, Wm. B. Bates, W. B. Carroll and others; conduct 5 mi. toll road.

Tenn., Wartrace.—Wartrace-Fairfield Turnpike Co., capital \$4000, inceptd. by H. F. Brown, Wm. B. Bates, W. B. Carroll and others.

Tex., Galveston.—City will pave Avenue O from 23d to 35th Sts.; 21,000 sq. yds. pavement; 1000 lin. ft. concrete curbs; 1000 lin. ft. concrete bulkheads; 910 lin. ft. concrete drains; 600 cu. yds. extra concrete; City Comms. receive bids until Aug. 10; A. T. Dickey, City Engr. (See Machinery Wanted—Paving.)

Tex., Hillsboro.—City voted \$10,000 bonds to improve streets. Address The Mayor. (Lately noted.)

Tex., Houston.—Harris county will vote on \$15,000 bonds to construct roads. Address County Comms.

Tex., Houston.—City Comms. let contract Western Paving Co., Oklahoma City, to pave Cleveland Ave. from Forest to South Boulevard and South Boulevard from Cleveland to Holmes St. with asphaltic concrete.

Tex., Ozona.—Crockett County voted \$20,000 additional road bonds. Address County Commissioners. (Lately noted.)

Tex., Pittsburg.—Camp County Road Dist. No. 1 voted \$100,000 bonds to construct macadamized roads; G. W. Keeling, County Judge.

Va., Goochland.—Goochland County will construct 3 sections soil road, aggregating 8.3 mi.; bids at County Clerk's office until Aug. 1; G. P. Coleman, State Highway Commr., Richmond, Va. (See Machinery Wanted—Road Construction.)

Va., North View.—Town will issue \$24,000 bonds to pave streets. J. R. Talkington, Town Clerk.

Va., Richmond.—City let contract John J. Curley to gravel Hill St., from 27th St. to city limits; cost \$3000.

Va., Richmond.—City let contract A. W. McCalay for granolithic curbing and guttering of Meadow St., from Ashland to Amelia St.; cost \$4408.09.

Va., Rustburg.—Campbell County Comms. let contract J. R. Ford & Co., Lynchburg, to grade and macadamize road from Williams Hotel in Brookneal to Falling River. (Lately invited bids.)

Va., Staunton.—Valley Turnpike Co. will expend \$75,000 to improve highway; improvements to include resurfacing road and constructing bridges; let contract Virginia Bridge & Iron Co., Roanoke, Va., at \$18,000, to build 3 iron bridges—one over North River at Mt. Crawford and one each on either side of town of Mt. Jackson; cost \$18,000; also plans to build concrete bridges.

Va., Wise.—Wise County Comms. will expend \$100,000 to grade and macadamize roads and construct bridges; 18 mi. grading; 22 mi. bituminous macadam; bids for portion of work let July 17; no date set for balance; let following contracts: Wolford, Phipps & Hibulin, Coeburn, Va., to grade Flat Woods Rd., 6 mi.; M. S. Davis & Co., Clintwood, Va., to grade Kaney Ridge Rd., 4 mi.; macadamizing by county forces; G. W. Seatt, County Engr., Norton, Va. (Lately invited bids.)

Va., Portsmouth.—Norfolk County will grade and ditch 5 mi. Johnston Rd. and ¼ mi. Gallberry Rd. with gravel; Com. for Purchase and Improvement of Roads receives bids until Aug. 4; also until same date to reconstruct county's portion of Indian Poll bridge over Lafayette River, and construct abutment to Broad Creek bridge G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Road and Bridge Construction.)

W. Va., Point Pleasant.—Mason County, Waggoner Dist., will vote Aug. 15 on bonds for road improvements. Address County Comms.

W. Va., Summersville.—Nicholas County, Beaver Dist., will vote Aug. 26 on \$250,000 bonds for road improvements. Address County Comms.

W. Va., Winfield.—Putnam County held bond elections Aug. 1, in 3 districts, for road improvements. Address County Comms.

SEWER CONSTRUCTION

Fla., Arcadia.—City let tentative contract Florida National Vault Co., Lakeland, Fla., at \$20,024.30 to extend sanitary sewer system; votes Aug. 29 on \$21,000 bonds; Cravens & Kimmel, Engrs., Parker Bldg., Arcadia. (See Road and Street Work.)

Ga., Cave Spring.—City votes Aug. 31 on \$4000 bonds to construct sanitary sewer system; contemplates 10-in. sewer line along streets to creek; T. Boozie, Rome, Ga., Engr.

Ga., Cochran.—City will vote again Aug. 20 on \$12,000 bonds to construct sewer system; J. C. Urquhart, Mayor. (Bonds lately noted as voted declared illegal; Wm. M. Crook, Engr., 614 Grand Bldg., Macon, Ga., is Engr.)

Ga., Savannah.—City will extend Casey Canal to river to provide drainage for East Side; estimated cost, \$90,000; E. R. Conant, Chief Engr. (Lately noted inviting bids.)

Ky., Hopkinsville.—City is having plans prepared by Solomon-Norcross Co., Atlanta, Ga., for sewer system.

Ky., Louisville.—City will construct sewers on Bank, from 19th to 20th Sts.; Hill, from 12th to 14th Sts.; Charles, from Krieger to Spratt Sts., 28th, from Bank to 29th Sts.; alley, between Willow, Bassett and Slaughter and Longest Sts.; Board of Public Works (Jas. G. Caldwell and others) receives bids until Aug. 9. (See Machinery Wanted—Sewer Construction.)

La., Shreveport.—City let contract Hamilton Bros. Construction Co., Cleburne, Tex., at \$101,600 to construct 40 mi. sanitary sewer extensions and to Moore & McCain of Shreveport at \$12,234.40 to construct 2 force lines; also let contract to furnish 4 mi. 12-in. cast-

iron pipe at \$23,968.72 and 14 tons pig lead for pipe joints; previously purchased additional pipe costing \$39,000; rejected bids to build 2 sewage-pumping plants, one located on Bayou Pierre for south side and other in western section of city; \$189,000 authorized by bond issue; John B. Hawley, Const. Engr., City Hall, Shreveport; Leon I. Kahn, Commr. of Public Utilities. (Noted in July.)

Md., Ocean City.—Atlantic Realty Co., 206 N. Calvert St., Baltimore, contemplates constructing sewer system. (See Land Development.)

Miss., Laurel.—City let contract Dabbs & Wetmore, Meridian, Miss., to construct storm sewers costing \$3000; materials purchased; Harry Bell, Engr. (Lately noted to construct sewers.)

Miss., Tchula.—City voted \$5000 bonds to construct sewer system and pave sidewalks. W. W. Gwin, Mayor. (Noted in May as contemplating bond issue and receiving bids for construction.)

Mo., Stanberry.—City let contract W. F. Powers, Guthrie, Okla., at \$18,817.40 to construct sewer system requiring 30,000 ft., 8, 10 and 12-in. pipe; Black & Veatch, Engrs., Inter-State Bldg., Kansas City. (Noted in June.)

N. C., Scotland Neck.—City let contract J. B. McCrary Co., Engr., Atlanta, Ga., for engineering and construction of sanitary sewer system, storm drainage and water-works; cost \$85,000. (Lately noted.)

Okla., Cordell.—City engaged Benham Engineering Co., Oklahoma City, as Engr. for sewer construction; plans not completed; include 10 to 15 mi. sewer pipe, etc.; R. L. Harvey, Mayor. (Lately noted to vote on \$25,000 bonds to construct sewers.)

S. C., Beaufort.—Town contemplates voting on \$75,000 bonds for sewer system, water-works and street improvements. Address Town Clerk.

S. C., Conway.—City voted \$30,000 bonds to extend sewers and water-works. Address The Mayor. (Noted in July.)

Tenn., Rockwood.—U. S. Sanitary Septic Tank Co., Memphis, Tenn., submitted proposition to construct municipal sewer system.

Tex., Beaumont.—City votes Aug. 22 on \$25,000 for sewer and water-works construction. Address The Mayor.

Tex., Memphis.—City retained Henry E. Elrod, Southwestern Life Bldg., Dallas, Tex., to prepare plans and supervise construction of sewage-disposal plant.

Tex., Seguin.—City voted \$36,000 bonds to construct sewer system. Address The Mayor. (Lately noted.)

Va., Chilhowie.—City is having plans prepared for sewer and water systems; cost \$30,000; J. D. Tate, Mayor.

TELEPHONE SYSTEMS

Ga., Waycross.—Southern Bell Telephone & Telegraph Co. (main office, Atlanta, Ga.) plans to expend \$8000 to \$10,000 to extend cables.

Ky., Georgetown.—Georgetown Telephone Co., R. L. Pyle, Mgr., will expend \$15,000 to \$16,000 in improvements to include changes in block system, installation of multiple jacks and cables, etc.

Va., Burkettown.—Burkettown Telephone & Telegraph Co., capital \$5000, inceptd.; W. A. Sherman, Pres., Burkettown; G. L. Showalter, V.-P., Myers Cave, Va.; J. W. Wine, Secy.-Treas., Mt. Sidney, Va.

TEXTILE MILLS

Ala., Cordova.—Cotton Cloth.—Indian Head Mills of Alabama will make changes and alterations in main mill; also construct reinforced concrete opening room; let contract to E. F. Hettrick Engineering Co., 1502 Empire Bldg., Birmingham; Lockwood, Greene & Co., Engrs.-Archts., Boston and Atlanta.

Ala., Lanett.—Textile Bleachery.—Lanett Bleachery & Dye Works will build additional 3-story structure costing \$50,000; let contract to Gallivan Building Co., Greenville, S. C.

Ga., Columbus.—Cotton Cloth.—Columbus Mfg. Co. will add 246 looms; has let contract.

Ga., Scottdale.—Cotton Duck, etc.—Georgia Cordage Mills will install 10 heavy looms to weave duck; has purchased; after Sept. 15 will be known as Georgia Duck & Cordage Co., capital \$60,000. (Lately noted to add weaving machinery.)

Ga., Egan.—Cotton Sheeting, etc.—Martel Mfg. Co. let contract Gallivan Building Co., Greenville, S. C., to build 90x75-ft. addition for weave room; standard mill construction;

tion; install 382 new automatic looms, replacing 250 old looms; ordered this machinery. (Lately noted to build addition, etc.)

N. C., Henderson.—Hosiery.—Henderson Hosiery Co. will erect 1-story, 75x37-ft. mill construction building costing \$3000; let contract W. H. Fogleman, Henderson. (Lately noted inceptd. with \$100,000 capital.)

N. C., Henry River.—Cotton Yarn.—Henry River Mfg. Co. will reconstruct cotton yarn mill recently damaged by flood; 3-story 150x75-ft. standard mill construction building costing \$60,000; 8000 producing spindles and other machinery costing \$15,000, including \$30,000 water-power plant with rope drive. (See Machinery Wanted—Cement.)

N. C., Wilmington.—Hosiery.—J. A. McNorton and others plan to establish hosiery knitting mill.

N. C., Monbo.—Cotton Products.—Turner Mills Co., W. D. Turner, Pres., Statesville, N. C., is reported contemplating construction additional mill on Catawba River.

Tenn., Chattanooga.—Hosiery.—Nick-a-Jack Hosiery Mills let contract Parks-Grimes Co., Chattanooga, to erect plant in South Chattanooga; main building of brick, 70x120 ft., 2 stories; dye house adjoining, 40x70 ft., 1 story; cost \$10,000. (Lately noted to build mill replacing present structure and as planning to add 100 knitters to present equipment.)

Tenn., Oneida.—Hosiery.—Garnett Andrews of Richmond Hosiery Mills, Chattanooga, Tenn., and others plan organization \$25,000 company to build hosiery knitting mill.

Tenn., Johnson City.—Silk.—Leon-Ferenbach Co., Wilkesbarre, Pa., and 23 E. 26th St., New York, organized branch company; C. L. Marshall, Pres.; A. B. Crouch, Secy.-Treas.; build silk mill; 2 stories and 200x50 ft. (Lately noted.)

Va., Hopewell.—Hosiery.—Prince George Mfg. Co. may establish hosiery knitting mill. (See Machinery Wanted—Knitting Machinery.)

WATER-WORKS

Fla., Arcadia.—City let tentative contract Florida National Vault Co., Lakeland, Fla., at \$18,807 to extend water mains; votes Aug. 29 on \$19,000 bonds; Cravens & Kimmel, Engrs., Parker Bldg., Arcadia. (See Road and Street Work.)

Ga., Cave Spring.—City votes Aug. 31 on \$16,000 bonds to construct water-works; contemplates 500,000-gal. standpipe; T. Boozee, Engr., Rome, Ga.

Ga., Cochran.—City votes again Aug. 20 on \$3000 bonds to extend water-works and electric-light system; J. C. Urquhart, Mayor. (Bond election lately noted declared illegal; Wm. M. Crook, Engr., 614 Grand Bldg., Macon, Ga., is Engr.)

Ga., Dublin.—City voted \$30,000 bonds to construct and equip filter plant; W. W. Robinson, Mayor. (Lately noted to vote.)

Ga., Dublin.—City voted \$30,000 bonds to build and equip filter plant. M. J. Gnyton, City Engr. (Lately noted to vote.)

Ga., Elberton.—City will install larger dynamo at pumping station to be used as auxiliary plant; cost \$1200. Address The Mayor.

Ga., Hogansville.—Hogansville Mfg. Co. let contract Pike Bros. Lumber Co., La Grange, Ga., to erect pump house; brick and concrete; roof of reinforced concrete, with tar and gravel covering; plans by Lockwood, Green & Co. of Boston and Atlanta.

Ga., Warm Springs.—T. C. Hudson, Northport, Me., plans to drill 100-ft. well. (See Machinery Wanted—Well Drillers.)

Ky., Fordsville.—Tyler H. Stone, Providence, Ky. (lately noted planning to construct water-works), proposes water facilities for about 1200 population; probably provide 50,000 gals. daily; steam or electric power; probably concrete reservoir or standpipe. (See Machinery Wanted—Water-works.)

La., Westwego.—V. A. Pitre is interested in proposed construction of water-works.

Md., East New Market.—Town will construct water mains and appurtenances; work comprises furnishing and installation of 5000 ft. 4 and 6-in. cast-iron mains, 13 fire hydrants, valves and fittings; Town Commrs., C. E. Bell, Secy., receives bids until Aug. 15; Kastenhuber & Anderson, Engrs., Easton, Md. (See Machinery Wanted—Water-works.)

Miss., Clinton.—City, R. R. Hardy, Clerk, defeated lately-noted bonds for water-works construction.

Miss., Cruger.—City contemplates voting on \$5000 bonds for water-works. Address The Mayor.

Miss., Richton.—Town retained Xavier A. Kramer, Engr., Magnolia, Miss., to prepare plans and specifications for water-works; A. T. Whitney, Mayor. (Lately voted \$15,000 bonds.)

Miss., Tchula.—City voted \$4000 bonds to construct water-works, including wells, mains, water tower or tanks; W. W. Gwin, Mayor. (Noted in May as contemplating bond issue and receiving bids for construction.)

N. C., Salisbury.—City contracts for water-works construction recently noted awarded included contract to W. M. Wilkes, Warrenton, N. C., for pipe line; recent item erroneously stated W. N. Mills. (Recent item included contracts for 8,000,000-gal. sedimentation reservoir, filter station, electrical machinery, pumps, etc., for daily capacity 3,000,000 gals.)

N. C., Scotland Neck.—City let contract J. B. McCrary Co., Engrs., Atlanta, Ga., for engineering and construction of water-works, sanitary sewer system and storm drainage; cost \$85,000. (Lately noted.)

Okla., Milburn.—City defeated \$21,000 bonds to construct water-works. (Noted in June.)

Okla., McLoud.—City will vote again on \$5000 bonds to construct water-works; recent election illegal. (Lately noted to vote and as having engaged Benham Engineering Co., Colcord Bldg., Oklahoma City, to prepare plans and specifications.)

Okla., Miami.—City voted \$25,000 bonds to extend and improve water and electric-light systems. Address The Mayor. (Lately noted.)

Okla., Perry.—City has \$6500 available to construct dam and \$5000 to extend water mains. Address The Mayor.

Okla., Shawnee.—City plans \$15,000 to extend water mains; T. T. Brown, Engr. (Lately noted to vote on water-works bonds.)

Okla., Wynoka.—City votes Aug. 31 on bonds to improve water-works, etc. Address The Mayor. (See Electric Plants.)

S. C., Beaufort.—Town contemplates voting on \$75,000 bonds for water-works, sewer system and street improvements. Address Town Clerk.

S. C., Conway.—City voted \$30,000 bonds to extend water-works and sewers. Address The Mayor. (Noted in July.)

Tenn., Knoxville.—City plans to vote Sept. 9 on \$225,000 bonds to improve water plant; J. B. McCallie, City Engr. (Lately noted as contemplating of pump with daily capacity of 15,000,000 gals.)

Tex., Barstow.—City let contract H. La Salle to construct water system.

Tex., Beaumont.—City votes Aug. 22 on \$25,000 bonds for water works and sewer construction. Address The Mayor.

Tex., Dalhart.—Dalhart Water Co., capital \$50,000, inceptd. by Sam E. Killen, J. N. Cole and J. E. Cary.

Tex., Miami.—City will construct water system and electric-light plant; Henry E. Elrod, Southwestern Life Bldg., Dallas, Tex., will prepare plans and supervise construction.

Va., Chilhowie.—City is having plans prepared for water and sewer systems; cost \$30,000; J. D. Tate, Mayor.

W. Va., Fairmont.—Monongah Service Co., capital \$10,000, inceptd. by A. L. Coleman, A. M. Rowe, J. J. Mulvehall and others.

W. Va., Shepherdstown.—Shepherdstown Light & Water Co. plans \$30,000 expenditure; purchase Shepherdstown Electric Light & Power Co., construct water system, etc.; Harrison Schley, Secy. (Lately noted organized, etc.)

WOODWORKING PLANTS

Ala., Mobile.—Furniture.—Acme Mfg. Co., capital \$5000, inceptd.; B. H. Condie, Pres.-Treas.; has plant to manufacture kitchen, porch and household furniture, etc.

Ark., Parker.—Staves.—Empire Stave Co., capital \$10,000, inceptd. by W. J. Francis, J. H. Curtis, W. J. Francis, Jr., and others.

N. C., Azalea.—Wood Products.—Azalea Woodworking Co. will repair 200x120-ft. building damaged by recent flood; ready to let contract.

N. C., High Point.—Furniture.—Giant Furniture Co. will erect 2 additional buildings, costing \$20,000; one structure, 100x125 ft., to be added to finishing room and warehouse; other building, 80x120 ft., to be annexed to machine rooms; both structures to be 2 story, frame; install electric motors and other equipment in machinery rooms; additions to contain 45,000 sq. ft. floor space, making total of 95,000 sq. ft. for entire plant.

N. C., North Wilkesboro.—Chairs.—Shell Chair Co. plans arranging plant to manufacture chairs in the white; later will finish product; has not decided plans for rebuilding. (Lately noted damaged by flood.)

Okla., Enid.—Carriages, etc.—Arens Bros. let contract to Weller & Reardon to erect 75x75-ft. brick building at 210 N. 2d St. for carriage and automobile company, Ed. A. Myers, City Bldg., interested; cost \$5000; tar and gravel roof; cement floor.

Va., Portsmouth.—Wooden Pipe.—Wyckoff Pipe & Creosoting Co. is reported to increase capacity of plant.

FIRE DAMAGE

Ark., Hamburg.—Oscar Bunn's residence.

Ark., Lowry.—T. N. Crumpler's mill and gin.

Fla., Glenwood.—Bond Lumber Co.'s saw mill, dry kiln and 110,000 ft. lumber; estimated loss \$100,000.

Ga., Atlanta.—Residence of Harry King, Prest. Clark University.

Ga., Savannah.—R. Karp's store building at 346 W. Broad St.; loss \$20,000.

Ga., Savannah.—A. P. Solomon, Jr.'s, warehouse; M. Greenwood's store.

Ky., Murray.—C. E. Byler's residence.

Ky., Newport.—Aloys Gadsdorf's 2 boat-houses; loss \$4000.

Ky., Newport.—F. C. Miller Planing Co.'s mill; reported loss, \$150,000.

Ky., Tyrone.—W. A. Bottom Son & Co.'s store building; loss \$10,000.

Miss., Meridian.—Mrs. Ida H. Edwards' store building.

Mo., St. Louis.—Building at 11th and Walnut Sts., occupied by May-Stern Furniture Co. and United Bakers Supply Co.; loss on building \$10,000.

N. C., Oriental.—B. F. Pickles' livery stables and blacksmith shops, occupied by Silas Cahoon.

N. C., Palmerville.—Globe Department Store, owned by Chas. A. and Cal. Peeler; loss \$5000.

N. C., Wilson.—G. S. Tucker & Co.'s warehouse, loss \$3000; Wilson Grocery Co.'s store, building owned by J. D. Farrior; Wells Bldg., owned by Selby Anderson; Wilson Furniture Co.'s store, building owned by Woodward heirs; total loss on buildings \$35,000.

Okla., Aline.—Aline Flour Mill.

Okla., Bismark.—Choctaw Lumber Co.'s (Dicks Lumber & Coal Co., Kansas City, Mo.) 8 drykilns.

Okla., Cashion.—Buildings owned by I. Stone Drug Co.; C. F. Knight Hardware Co.; Charles Price; loss \$25,000.

S. C., Orangeburg.—O. W. Hartness' warehouse.

Tenn., Knoxville.—John Logan's residence on Kingston Pike; loss \$6000.

Tex., Austin.—Southwestern Telephone & Telegraph Co.'s plant; Kreisle Bldg.; loss \$45,000; Bell Motor Car Co.'s plant; loss \$15,000.

Tex., Bryant.—Residence owned by Mrs. Otto Boehme and occupied by T. L. Petty and O. A. McGown; loss \$3000.

Tex., Burleson.—Pete Wicker's residence.

Tex., El Paso.—Nelson Bros.' engine room and pump house; loss \$6000.

Tex., Fort Worth.—Bryant's Studio owned by Mrs. Phoebe Harold and John Dunn; loss \$4500. (Lately noted.)

Tex., Houston.—Residences occupied by Mrs. Zeddie Vick, H. C. Snoddy and Mr. Goolsby.

Tex., Kaufman.—James Young's building; loss \$4000; W. N. Fagan's building, \$4000; Texas Hardware & Furniture Co.'s building; loss \$3000.

Tex., Leon Springs.—Mrs. Rena Maverick Green's ranch house, 5 mi. from Leon Springs.

Tex., Munday.—Munday Trading Co.'s store; Bank of Munday's building; loss \$40,000.

Tex., Wichita Falls.—McFall Transfer & Storage Co.'s warehouse; owned by J. A. Kemp, Frank Kell and C. C. Huff; loss \$10,000.

Va., Purcellville.—F. P. Wilson's barn; loss \$5000.

FLOOD DAMAGE

Md., Hagerstown.—Sherley Hotel (under construction), owned by O. D. Sherley; Vivian Restaurant.

N. C., Marshall.—Store and residence owned by J. M. Bailey.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ala., Montgomery.—M. Wolff, Prop. Imperial Hotel, is receiving bids through Okel & Cooper, Archts., Montgomery, to erect fireproof apartment-house; elevator; cost \$50,000.

Fla., Fort Myers.—F. W. Butterfield, Concord, N. C., will erect apartment-house.

Fla., Miami.—J. K. Dorn is having plans prepared by Geo. L. Pfeiffer, Lemon City, Fla., for 3-story apartment-house; 75x75 ft.; cost \$34,000; ready for estimates about Aug. 20.

Fla., Miami.—Carl G. Fisher is having plans prepared by August Geiger, Miami, for apartment-house at Alton Beach; 57x104 ft.; 3 stories; 4 suites; garage for 6 cars.

Ga., Atlanta.—Mrs. M. C. Bratten will expend \$3500 to repair apartment-house.

Ky., Ashland.—Wm. Meade will erect store and apartment building. (See Stores.)

Mo., Kansas City.—Wm. G. Wrenn will erect apartment-house; 3 stories; 18 suites; cost \$30,000.

Mo., Kansas City.—Home Investment Co. will erect apartment-house; 3 stories; 6 suites; cost \$18,000.

Mo., St. Louis.—Alco Investment Co. will erect 3 apartment buildings; 3 stories; six 3-room apartments each; cost about \$50,000.

Mo., St. Louis.—William H. Fischer and Frank W. Gruendel acquired site 250x250 ft. and will improve with double 3-room flats; construction by Mr. Gruendel.

Tenn., Nashville.—Bruce Douglas will erect brick apartment-house; 3 stories; cost \$5000.

Tenn., Nashville.—Charles Cohn is having plans prepared by D. W. Southgate, Nashville, for apartment-house; 27 suites; 3 stories; brick; flat composition roof; vacuum heating system; contract awarded in detail; plans at Builders' Exchange by Aug. 5.

Tex., El Paso.—J. K. Turberville will erect tenement; cost \$7800.

Va., Norfolk.—Louis R. Moss, Norfolk, plans for apartment-house at 516 Westover Ave.; bids opened July 31.

Va., Richmond.—Virginia Realty & Construction Co. will erect 6 brick tenement houses on Kemper St.; cost \$5600.

Va., Richmond.—O. J. Davis will erect 2 semi-detached brick apartment-houses; cost \$6000.

ASSOCIATION AND FRATERNAL

Ga., Augusta.—A. F. & A. M. are having plans prepared by G. Lloyd Procher, Augusta, for building; cost \$50,000. (Previously noted.)

N. C., Whiteville.—A. F. & A. M. will erect 3-story temple; brick; first floor for stores.

Va., Highland Springs.—I. O. O. F. No. 78 will erect lodge building; 2 stories; concrete block construction; first floor to contain clubrooms, store and shower baths; second floor for lodge hall; cost about \$6000.

BANK AND OFFICE

Ga., Albany.—Albany National Bank will convert 3-story building into bank and office building.

La., Natchitoches.—J. H. Williams will soon open bids to erect office, store and opera house building. (See Theaters.)

Mo., St. Louis.—Pellgreen Construction Co. will erect office and store building. (See Stores.)

Tex., San Antonio.—Texas Refining Co. will erect \$9000 seedhouse and office building.

Tex., Waco.—Texas Telephone Co. has plans by Roy E. Lane & Co., and J. L. West, associated architects, Waco, to remodel building for Chamber of Commerce.

W. Va., Charleston.—Kanawha Banking & Trust Co., Fred Staunton, Pres., will erect 10-story bank and office building; site 48x80 ft.; plans or architect not selected; no definite arrangements made.

CHURCHES

Fla., St. Petersburg.—Christian Science Church acquired \$10,000 auditorium and will remodel for church. Address The Reader.

Ga., Atlanta.—West End Baptist Church will erect 2-story brick veneer building; cost \$5500; day labor. Address The Pastor.

Ga., McDonough.—Baptist Church is having plans prepared by J. C. Battle and S. D.

Trowbridge, Atlanta, for building; 2 stories; brick; folding glass doors; metal shingles; cost \$4000; probably day labor; H. J. Copeland, Chrmn. Building Com.

Ky., Murray.—First Baptist Church, Rev. H. Boyce Taylor, Pastor, will erect building; cost \$22,000.

La., Shreveport.—Avenue Baptist Church (colored), Rev. L. Allen, Jr., Pastor, will erect building; cost about \$14,000.

Mo., Kirksville.—Presbyterian Church, P. J. Rieger, Chrmn. Bldg. Com., will erect building; Trunk & Gordon, Archts., St. Joseph, Mo.; bids opened.

Mo., Morehouse.—Rev. Jas. P. Bridges, Charleston, Mo., is interested in erection of church building; plans by J. E. Greene, 508 American Trust Bldg., Birmingham, call for press brick veneer structure; cement plaster; furnace heat; metal ceiling in auditorium; wood cornice; cost \$4000.

Mo., St. Louis.—St. Pius Catholic parish, Rev. John Lyons, pastor, will erect church; Romanesque style; campanile; cost \$100,000.

N. C., Charlotte.—First Reformed Church, Rev. Shuford Peeler, pastor, will erect building; brick; cost about \$18,000.

Okla., McAlester.—Phillips Memorial Methodist Episcopal Church, South, deferred letting contract to erect Sunday-school building until late in fall; Smith & Parr, Archts., Oklahoma City. (Noted in June.)

Okla., Waynoka.—Baptist Church, Rev. David B. Jackson, Pastor, does not plan to enlarge building as lately noted.

S. C., Greenville.—Associated Reformed Presbyterian Church, Rev. W. A. McAuley, pastor, will erect bungalow church or Sabbath-school and auditorium with provision for addition to auditorium.

Tenn., Nashville.—West Nashville Presbyterian Church is receiving bids through M. S. Cockrill, Chrmn. Bldg. Com., to erect building; brick; steam heat; composition shingle roof.

Tex., Austin.—University Baptist Church will erect building on Guadalupe St. Address The Pastor.

Va., Alexandria.—Christ Church will improve building. Address The Pastor.

Va., Norfolk.—Church of the Good Shepherd has plans by Neff & Thompson, Norfolk, for building; brick; 36x70 ft.; bids opened Aug. 4.

Va., Norfolk.—Ohef Shalom Temple opened bids to erect synagogue; 75x125 ft.; auditorium to seat 800; Sabbath-school in rear, 40x80 ft., seating capacity 500; face brick; terra cotta and cut stone trim; Classic style; Ionic columns; Baker & Brinkley, Norfolk, are lowest bidders at \$81,498; Ferguson, Calrow & Wrenn, Archts., Norfolk. (Lately noted.)

Va., Richmond.—Hood Zion Methodist Church (colored), J. C. Stephenson, Pastor, will erect building.

W. Va., Parkersburg.—St. Paul's Methodist Episcopal Church plans to erect addition to building. Address The Pastor.

CITY AND COUNTY

Ala., Anniston.—Library.—City has plans by Lockwood & Poundstone, Anniston, for Carnegie library; 2 stories; 40x80 ft.; limestone; Corinthian style; auditorium, staff room, etc., on second floor; hardwood interior finish. (Previously noted.)

Ark., Little Rock.—Fire Station.—City, Chas. E. Taylor, Mayor, appropriated \$9000 for Second ward fire station; Clyde A. Ferrell, Archt., Little Rock.

Fla., Miami.—Jail.—County Commrs., Z. T. Merritt, Clerk, receives bids until Aug. 26 to repair and remodel Dade County jail; plans and specifications at office August Geiger, Archt., Miami; cost about \$25,000. (Lately noted.)

Ga., Augusta.—City Hall.—City has plans by Thos. M. Campbell, Augusta, and receives bids until Aug. 15 to remodel old post-office building for city hall.

Ky., Lexington.—Fire Station.—H. M. Schoonmaker, Commr. of Public Property, Hernando Bldg., receives bids until Aug. 7 to erect fire station; brick; tile and metal roof; stone foundation; plans at office Mr. Schoonmaker, as above.

Miss., Clarksdale.—Jail.—Coahoma County Supervisors receive bids until Aug. 7 to

erect addition to county jail; install steam heat and electric lights; plans and specifications at office L. M. Weathers, Archt., Memphis, Tenn., and S. F. Carr, Chancery Clerk, Clarksdale.

Okla., Collinsville.—Library.—City will erect Carnegie library; 34x54 ft.; brick; tile roof; wood floors; steam heat; date opening bids not set. Address H. C. Bollman or J. H. Middleton. (Lately noted.)

Okla., Lawton.—Fair.—City voted \$10,000 bonds to erect fair buildings. Address The Mayor. (Lately noted.)

Okla., Waynoka.—City Hall, Jail and Fire Station.—City ordered vote Aug. 31 on bonds to erect city hall, fire station, jail, etc. Address The Mayor. (Lately noted to erect city hall.)

S. C., Conway.—Town Hall.—Town voted \$10,000 bonds to purchase and repair town hall. Address Town Clerk. (Lately noted.)

Tenn., Morristown.—City Hall and Auditorium.—City, W. B. Whitaker, Mayor, receives plans and specifications at Recorder's office, in City Hall, until Aug. 18 for city hall and auditorium; 70x117 ft.; 2 stories; brick and stone; cost \$20,000 to \$30,000. (Lately noted.)

Tex., Houston.—Library.—City, Ben Campbell, Mayor, will expend \$15,000 to improve Carnegie library.

COURTHOUSES

Miss., Clarksdale.—Coahoma County Supervisors receive bids until Aug. 7 to repair and enlarge courthouse; plans and specifications at Clerk's office; S. F. Carr, Chancery Clerk and ex-officio Clerk.

Tex., Paris.—Lamar County Commrs. will receive bids until Aug. 26 to erect courthouse; 100x100 ft.; fireproof; reinforced concrete; composition roof; reinforced concrete floors; low pressure gravity heat; cost \$150,000; Sanguinet & Staats, Archts., Fort Worth; Barry & Smith, Asso. Archts., Paris. (Previously noted.)

DWELLINGS

Ala., Montgomery.—N. Kahn will erect 1-story brick residence; cost \$4200.

D. C., Washington.—A. H. Orndorff, Cherrydale, Va., is reported to erect 2 residences; cost \$6000.

D. C., Washington.—Hugh S. Legare has plans by A. B. Mullett & Co., 721 Union Trust Bldg., Washington, to remodel 4-story brick dwelling; cost \$6000.

D. C., Washington.—H. P. Butler will erect 2-story brick residence; cost \$3000.

D. C., Washington.—Jas. D. Burn has plans by S. R. Turner, 1112 Seventh St., N. W., Washington, for 2-story brick residence; cost \$4500.

D. C., Washington.—Thomas H. Yeager will erect 2 residences. (See Contracts Awarded—Dwellings.)

D. C., Washington.—Harry A. Kite, 1338 G St., N. W., has plans by A. E. Landvoigt, Woodward Bldg., Washington, for 7 dwellings at 218-30 Fourteenth and a half St., N. E.; brick and frame; 14x40 ft.; slag roof; wood floors; Latrobe stoves; gas heat; cement sidewalks; cost \$14,000; construction by owner who may be addressed. (Lately noted.)

D. C., Washington.—Chas. E. Wire, Inc., 1413 H St., acquired 10-acre site in upper Fourteenth St. and will improve with about 100 dwellings to cost \$5000 to \$6000 and 30 stores and office buildings; residences will be of brick; 6 and 8 rooms; sleeping porches; sun parlors 16 ft. sq.; work to start in about 3 weeks.

Fla., Boca Ratone.—B. A. Combs of Deerfield, Fla., will erect residence near Boca Ratone.

Fla., Boca Ratone.—J. M. Carroll of Yamato, Fla., will erect residence on Dixie Highway.

Fla., Davista.—R. G. Grigg will erect residence on Park St.; 8 rooms; 1 story; stucco finish.

Fla., Miami.—G. W. Gardener will erect residence at Bay View Park; 10 rooms; cost \$15,000; ready for estimates about Aug. 10; Geo. L. Pfeiffer, Archt., Lemon City, Fla.

Fla., Miami.—Walter E. Flanders, Prest. Maxwell Motor Co., Detroit, Mich., is having plans prepared by Geo. L. Pfeiffer, Lemon City, Fla., for residence at Buena Vista; 54x86 ft.; 2 stories, basement and mansard; reinforced concrete; ordinary construction; clay tile roof; ordinary interior floors; terraces, verandas and balconies reinforced concrete with tile facing; hot-water heat; city lighting; soon call for bids; cost \$48,000. (Lately noted.)

Fla., Miami.—C. J. Martin of Georgia Lumber Co. will erect residence on Atlantic Blvd.; 9 rooms; red brick and shakes; cost \$5500.

Fla., Miami.—S. M. Tatum has plans by Geo. L. Pfeiffer, Lemon City, Fla., for residence; 9 rooms; day labor; cost \$9000. Address owner.

Ga., Atlanta.—Dr. E. O. Silviens will erect 1-story brick-veneer residence; cost \$3000; day labor.

Ga., Augusta.—J. B. Norris has plans by Alfonso Reveron, Dugas Bldg., Augusta, for two 5-room California bungalows; press brick; composition roof; Keenes Bros.' plaster; brick mantels; metal lath; plumbing and heating; cost \$2800. Address architect. (See Machinery Wanted—Building Materials.)

Ga., Columbus.—Lloyd Gowers will erect residence.

Ga., Columbus.—G. H. Whitaker, care of Hardaway Contracting Co., will erect residence; F. Roy Duncan, Archt., Exchange Bldg., Columbus.

Ga., Homerville.—G. A. Gibbs will erect residence.

Ga., Homerville.—Dr. F. W. Reuvs is reported to erect residence.

Ga., Macon.—Dr. Paul Gates is having plans prepared by P. E. Dennis, Macon, for residence; brick veneer; bungalow type; hardwood floors; tile work; cost \$3500.

Ga., Marshallville.—C. C. Haslam is having plans prepared by P. E. Dennis, American National Bank Bldg., Macon, for 1-story frame residence; 50x60 ft.; wood; shingle roof; ordinary construction; fireplaces; city lighting; bids opened about Aug. 4; cost \$3000. Address architect.

Ga., Newnan.—J. F. Featherstone is having plans prepared for residence; brick veneer; 10 rooms.

Ga., Savannah.—Geo. F. Armstrong will erect residence and garage; Henrik Wallin, Archt., Savannah.

Ga., West Point.—R. W. Jennings, Lanett, Ala., will erect bungalow.

Ky., Lexington.—D. V. Terrill of University of Kentucky will erect residence in Maxwellton; Swiss chalet type; completion by Sept. 1.

Ky., Louisville.—Mrs. L. A. Marden will erect frame dwelling; cost \$3100.

La., New Orleans.—R. H. Tarrant will erect residence in parkway addition; 2 stories.

Md., Baltimore.—Edward Gibbs has plans by Lawrence Hall Fowler, 347 N. Charles St., Baltimore, for 2-story and attic residence at Guilford; Georgian style; brick; cost about \$20,000.

Md., Baltimore.—Joseph L. White Realty Co., Robinson and Monument Sts., will erect forty 2-story dwellings in 2800 block of Harford Rd.; 14x45 ft.; cost about \$80,000.

Md., Baltimore.—A. K. Wampole is having plans prepared by Mott B. Smith, New York, for residence on Whitfield Rd.; contractors estimating are: G. Walter Tovell, Eutaw and McCulloch Sts.; A. F. West, 15 E. Fayette St.; Cowan Building Co., 106 W. Madison St.; Turner Bros., 706 Union Trust Bldg., and Gladfelter & Chambers, Thirtieth St. and Roland Ave., all of Baltimore; Roland Park Co., Roland Park, Md.

Md., Baltimore.—J. F. Wenckel is having plans prepared by H. G. Crisp, 2709 St. Paul St., Baltimore, for residence in West Arlington; 2½ stories; cost \$5900.

Md., Baltimore.—Turnbull & Morgan are having plans prepared by Phillip S. Morgan, 12 E. Lexington St., Baltimore, for five 2-story residences on Poplar Grove St., south of Laurens St.; 36x20.8 ft.; 8 rooms; front and back porches; brick; hot-water heat; tile baths; hardwood floors; cost \$12,000.

Md., Mt. Washington.—C. Bradley Hays, Asst. Cashier Merchants-Mechanics National Bank, South and Water Sts., Baltimore, will erect cottage at Rose Hill.

Md., Ocean City.—Atlantic Realty Co., 206 N. Calvert St., Baltimore, contemplates erecting bungalows and cottages. (See Land Development.)

Miss., Clarksdale.—King & Anderson will erect residence.

Mo., Kansas City.—P. A. Wieshire will erect 2-story duplex dwelling; cost \$4000.

Mo., Kansas City.—A. J. King Realty Co., 12 E. 9th St., will erect 30 bungalows and 2-story dwellings; brick, frame and stucco; wood shingle and composition roofing; oak floors; hot-air heat; city electric lights; cost \$2000 to \$3000 each; plans and construction by owner.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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Mo., Kansas City.—A. G. Lohefner, with Swift & Co., will erect residence in Wornall Manor.

Mo., Kansas City.—B. C. Sharp will erect residence on College Ave.

Mo., Kansas City.—David Thornton, Prest. of State Bank of Kansas City, will erect residence in Rockhill.

Mo., Kansas City.—B. A. Bowmaster will erect three 1½-story frame dwellings; cost \$6000.

Mo., Kansas City.—Max Kahn will erect residence; 1-story; stone and stucco veneer; cost \$5000.

Mo., Kansas City.—Glenco Railway & Investment Co. will erect 2-story stucco veneer residence; cost \$5500.

Mo., Kansas City.—Board of Public Welfare, W. I. Potter interested, will erect 15 cottages; concrete; probably concrete floors; cost about \$25,000.

Mo., Kansas City.—E. S. Gormley will erect residence in Wornall Manor.

Mo., Kansas City.—E. S. Moser of Niles & Moser Cigar Co. will erect residence at 51st and Oak Sts.

Mo., Kansas City.—R. R. Wells will erect residence on Benton Boul.

Mo., Kansas City.—W. C. Reel, 4163 Holly St., will erect residence at 420 W. 62d St., Wornall Manor.

Mo., Kansas City.—N. S. Shannon will erect 2-story brick residence; cost \$11,000.

Mo., Kansas City.—Dr. Logan Clendenen does not contemplate erecting dwelling as lately noted.

Mo., Kansas City.—G. W. Wilkie will erect 4 frame residences; cost \$9000.

Mo., St. Louis.—Charles Mueri will erect 19 additional bungalows on Humphrey St.; 5 and 6 rooms each.

Mo., St. Louis.—Francis Galt will erect 12 cottages, 4447-66 Labadie Ave. and 3906-16 N. Taylor Ave.; cost \$25,200.

N. C., Asheville.—J. H. Allport will erect residence in Lawrence Pl.; 9 rooms; cost \$9000.

N. C., Charlotte.—Carolina Realty Co. will erect residence on South Morehead St.; 6x48 ft.; brick veneer; slate and zinc roof; oak and tile floors; hot-air heat; electric lights; cost \$15,000; plans and construction by owner.

N. C., Raleigh.—D. T. Poindexter will erect residence; 2 stories; 9 rooms; cost \$8900.

N. C., Winston.—C. A. Fogle has plans by Northup & O'Brien, Winston-Salem, for residence.

Okla., Tulsa.—Theo. E. Tack, Jr., Daniel Bldg., has plans by L. Blue, Tulsa, for residence; 56x34 ft.; frame; shingle roof; oak floors; cost \$7000; hot-air heat, \$175. (Lately noted.)

S. C., Anderson.—A. M. McFall has plans by Casey & Pant, Anderson, for rebuilding residence; brick veneer; cost \$5000 to \$6000; construction under supervision W. W. Johnson and Jim Owens, Anderson.

S. C., Charleston.—J. K. Nettles will erect 2 dwellings; cost \$3600.

S. C., Greenville.—Dr. T. G. Crymes has plans by S. D. Trowbridge, 603-4 Grant Bldg., Atlanta, for brick veneer residence; Italian renaissance style; 2 stories; tile roof; hardwood floors; heating plant not determined; cost \$7500 to \$8000.

S. C., Kershaw.—John T. Stevens has plans by Urquhart & Johnson, Columbia, S. C., for dwelling lately noted; 10 rooms; brick; slate or tile roof; hardwood and brick; hot-water heat; city electric lights; cost \$20,000. Address owner. (See Machinery Wanted—Flooring; Bathroom Fixtures; Heating Plant; Electric Equipment; Plumbing; Sewerage System.)

Tenn., Chattanooga.—W. S. Milne will erect residence in Riverview.

Tenn., Friendship.—Thad Haley will erect residence on Depot St.

Tenn., Knoxville.—John Logan will probably rebuild residence noted damaged by fire at loss of \$6000.

Tenn., Memphis.—F. L. Smith will erect 1-story frame residence; cost \$3000.

Tenn., Nashville.—Mrs. B. B. Allen has plans by Russell E. Hart, Nashville, for additions and alterations to residence; contract awarded as a whole, exclusive of plumbing, heating and wiring; bids opened Aug. 4.

Tenn., Nashville.—A. C. Howard will erect residence; 1 story; brick veneer; cost \$3000.

Tenn., Nashville.—Rev. H. J. Mikell is having plans prepared by Russell E. Hart, Nashville, for residence; plans ready about Aug. 2.

Tex., Dallas.—H. E. Payne will erect residence; 8 rooms; 2 stories; frame; cost \$3000.

Tex., El Paso.—Perry Kirkpatrick will erect bungalow; cost \$3000.

Tex., Galveston.—Oscar Hooker will erect 2-story frame residence; metal roof; cost \$3000.

Tex., Houston.—Charles Sigler will not erect residence, as lately noted.

Tex., Houston.—Mrs. Lida S. Hull will erect \$4000 residence.

Tex., Post.—Chas. S. Brown has plans by R. E. Gilmore, Post, for residence; 1 story; 48x50 ft.; brick and frame; shingle roof; cost \$2850; bids opened July 31; separate bids for plumbing and wiring. Address architect. (See Machinery Wanted—Flooring.)

Va., Norfolk.—Mrs. Fannie W. Simmons will erect frame and stucco residence; cost \$5000.

Va., Norfolk.—N. G. Wilson will erect 2-story brick residence; cost \$10,000.

Va., Richmond.—J. L. Walthour will erect brick dwelling; cost \$5700.

Va., Richmond.—O. J. Davis will erect 2-story brick residence; cost \$6000.

Va., Richmond.—Julian Tyler will erect 2-story brick residence; cost \$7000.

Va., Richmond.—A. G. Glasgow will expend \$5000 to remodel brick residence.

Va., Richmond.—H. L. Golsan will erect 2-story brick residence; cost \$30,000.

Va., Richmond.—J. W. Fry will probably erect residence.

Va., Richmond.—J. B. Simpson will erect frame residence; cost \$4800.

GOVERNMENT AND STATE

D. C., Washington.—Department of Justice.—Harry Wardman and Thomas Bones, 1430 K St., N. W., have plans by R. B. Redington, 1430 K St., N. W., Washington, for building for Department of Justice; 148x145 ft.; reinforced concrete; 8 stories; exterior Indiana limestone and tapestry brick; concrete slag roof; tile and marble floors; steam heat; electric lights; vacuum cleaning system; 3 electric elevators; telegraph and telephone station on 6th floor; 11,000 sq. ft. floor space on each floor; cost \$300,000; construction, by owner, begun. (Lately noted.)

Tenn., Nashville.—Federal Building.—Treasury Dept., James A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids Aug. 28 to erect addition of 2 wings, 130x160 ft. each, and remodel building for post office, customhouse, courtrooms, etc.; fireproof; steel framework; exterior walls, Ashlar stone; reinforced concrete floors; interior partitions; terra cotta and gypsum tile; 2 additional entrances to postoffice; second floor for United States courtroom, 35x60 ft., and Internal Revenue Dept.; floor base, cork tile; install boilers; provide refrigerating plant, etc.; cost about \$400,000. (Lately noted.)

HOSPITALS, SANITARIUMS, ETC.

D. C., Washington.—Quartermaster Corps, Edward Canfield, Jr., Captain, opened bids to erect nurses' home and hydro-therapeutic ward at Soldiers' Home; plans and specifications at depot quartermaster's offices in Philadelphia and New York, and office of Mr. Canfield; former structure 229,000 cu. ft.; brick; tin; slate and copper roof; wood and alternate terra-concrete flooring; latter structure 266,900 cu. ft.; brick; slate and specification roof; terra cotta and concrete flooring; hot-water heating in both buildings from central plant; lighting from central plant; Melton Construction Co., 11th and H Sts. N. W., Washington, is lowest bidder for former at \$56,829, and J. L. Nolan Construction Co., Munsey Bldg., Washington, lowest bidder for latter at \$51,105; Hugh N. McAuley, Archt., Woodward Bldg., Washington.

Ky., Winchester.—Company organized with \$25,000 capital to erect general hospital; B. P. Wooten, C. G. Bowman and A. D. Petrey, Bldg. Com.

La., New Orleans.—Advisory Board of John Diebert Memorial Hospital for Tuberculosis is having plans prepared by E. A. Christy, New Orleans, for hospital.

Miss., Meridian.—A. J. Lyon has plans by Burt Stuart, Meridian, for 2-room cottage addition to Tuberculosis Hospital.

Okla., Tulsa.—Maggie Baden, Carolyn Lolls and others are interested in erecting negro hospital; cost about \$12,000.

S. C., Spartanburg.—Dr. H. R. Black is Chrmn. of Com. promoting erection of general hospital, training school and sanatorium; cost about \$100,000.

Tenn., Jackson.—Drs. J. A. and J. J. Crook will improve sanitarium, including double porch, sun parlor, etc.

Tenn., Nashville.—St. Thomas Hospital will erect boiler plant and laundry; J. H. D. Gregg, Supt. of Construction, will receive bids for equipment and for smoke-stack; contracts to be let on main building include marble and tile, interior millwork, plastering and electric wiring; Mr. Gregg will do reinforced concrete work.

Va., Leesburg.—Loudoun County Hospital, R. R. Walker, Prest., is having plans prepared by Nathan C. Wyeth, 1517 H St. N. W., Washington, D. C., for hospital; Mr. Walker will also superintend construction. (Lately noted.)

HOTELS

D. C., Washington.—Arlington Corporation, Oliver J. Sands, Secy.-Treas., Richmond, Va., receives bids until Aug. 15 to erect Arlington Hotel; fireproof; structural steel, structural terra-cotta and reinforced concrete; exterior brick, stone and architectural terra-cotta; slag and tin roof; 12 electric and hydraulic elevators; cost \$2,500,000; Wyatt & Nolting, Archts., Keyser Bldg., Baltimore; Thos. W. Powers Engineering Co., Engrs., Washington L. & T. Bldg., Washington; contractors estimating are Geo. A. Fuller Co., Fuller Bldg.; Thompson-Starrett Co., 51 Broad St.; John H. Parker Co., 315 Fourth Ave.; Wells Bros., 33 W. 42d St.; Marc Elditz & Son, 30 42d St.; B. F. Kenny Co., 3 Old Broadway; A. B. Standard, U. S. Rubber Co. Bldg.; all of New York; John T. Wilson Co., Mutual Bldg., Richmond; Boyle-Robertson Construction Co., Washington; Morrow Bros., Fidelity Bldg., Baltimore; John Thatcher & Son, 60 Park Ave., Brooklyn, N. Y. (Noted in March.)

Fla., St. Petersburg.—L. H. Miller, Lisbon, Ohio, and Frank X. Morrison, Indianapolis, Ind., have plans by Ferdon & Feltham, St. Petersburg, for Albemarle Hotel; 40 rooms; 3 stories; artificial stone blocks; steel lath and stucco; composition roof; all rooms with bath, hot and cold water; steam heat; completion by Dec. 15. (Lately noted.)

Ky., Lexington.—E. L. March acquired South Broadway Inn and will convert into hotel; 30 rooms (15 with private baths); hot and cold water in all rooms.

Md., Hagerstown.—O. D. Sherley, 127 E. Franklin St., will erect hotel; 40 rooms; 5 stories; brick and concrete; slag roof; yellow pine double floors; cost \$25,000; steam heat, about \$1700; city lighting; wiring and fixtures, \$750; sidewalks; electric elevator, \$1500; plans and construction by owner; this building under construction noted damaged by flood.

Md., Ocean City.—Atlantic Realty Co., 296 N. Calvert St., Baltimore, contemplates erecting hotel.

Mo., Kansas City.—Bankers' Realty Investment Co., Omaha, Neb., R. M. Ward, Local Mgr., will erect hotel at Linwood Blvd. and the Paseo; probably 7 stories; private garages in rear; Mr. Ward wires Manufacturers Record: "Building will be 130x148 ft.; reinforced concrete, tapestry brick and blazed terra-cotta; cost \$600,000."

Okla., Ardmore.—Ardmore Hotel Co., organized with Chas. von Weise, Prest.; L. A. Bourne, Tulsa, Okla., V.-P.; H. L. Sturm, Secy.; J. R. Sharpe, Dallas, Tex., Treas.; will erect \$200,000 hotel; construction begins in 30 days. (Lately noted.)

S. C., Pomaria.—James P. Setzler will rebuild Pomaria Hotel to replace burned structure.

Tex., San Angelo.—J. W. White, Prest. German-American Bank of Mason, Tex., is promoting erection of 6 or 8-story hotel building.

MISCELLANEOUS

Ala., Mobile.—Clubhouse.—Alba Fishing & Hunting Club, Dave S. Bauer, Prest., will erect clubhouse.

Fla., West Palm Beach.—Auditorium.—A. E. Lewis, Miami, Fla., will prepare plans for auditorium for recreation pier.

Ky., Melbourne.—Administration Building.—Sisters of Providence have plans by H. McClory, 907 Gerke Bldg., Cincinnati, for administration building and mother house; 2 and 3 stories.

La., New Orleans.—Orphanage.—Asylum for Destitute Boys will erect and equip building for asylum farm.

La., Shreveport.—Auditorium.—Shreveport Chautauqua Assn., Dr. M. E. Dodd, Prest., will erect auditorium; probably umbrella type; steel and frame; 125 ft. in diam.; stage 40x40 ft. with separate roof, sounding boards, etc.; cost about \$15,000.

N. C., Fayetteville.—Fair.—Cape Fear Fair Assn. has plans by Benton & Moore, Wilson, N. C., for grandstand and exhibit hall; 60x250 ft.; wood; concrete foundation and

floor; shingle or composition roof; cement floor; cost \$8000 to \$9000; construction begins about Aug. 1. Address R. M. Jackson, Secy. (Lately noted.)

W. Va., Charleston.—Barracks.—Salvation Army will erect additional story to barracks under construction; cost \$10,000; total cost \$16,000.

RAILWAY STATIONS, SHEDS, ETC.

Ala., Bessemer.—Alabama Great Southern R. R., C. Dougherty, Chief Engr., Cincinnati, contemplates erecting freight station; 33x205 ft.; office portion, 2 stories; brick veneer; freighthouse, reinforced concrete; concrete foundation; low-pressure steam heat; steel doors and windows; 12x30-ft. brick platform; cost about \$30,000.

Ala., Decatur.—Louisville & Nashville R. R., W. H. Courtenay, Ch. Engr., Louisville, Ky., is reported to enlarge and improve passenger station; cost \$10,000.

Ark., Stuttgart.—Chicago, Rock Island & Pacific Ry., C. A. Morse, Chief Engr., Chicago, is having plans prepared by A. T. Hawk, Stuttgart, for depot and freight house; 24x132 ft.; 1 story; frame, brick veneer and stucco; green tile roof; wood floors; hot-water heat; city lighting; cost \$19,500. Address architect. (Previously noted.)

Fla., Jacksonville.—Jacksonville Terminal Co. appointed L. G. Wallis, of Engineering Dept., Southern Ry., Washington, D. C., as engineer of construction for union station. (Company lately noted to have increased capital from \$200,000 to \$750,000 to erect this structure.)

Ga., Savannah.—Midland Ry., George M. Brinson, Prest., will erect passenger station; 2 stories; brick; 50x84 ft.; general offices on second floor; steam heat; green tile roof over station and entrance; freight station, 50x450 ft.; cost about \$25,000; construction by Mr. Brinson; Henrik Wallin, Archt., 23 Abercorn St., Savannah.

Mo., Kansas City.—Kansas City Interurban Terminal Co., promoted by Commercial Improvement Co., Edw. J. Becker, Secy., applied for franchise to build interurban terminal passenger station on Baltimore Ave. between 9th and 10th Sts., to cost \$1,300,000.

Tenn., Nashville.—Nashville-Gallatin Interurban Ry., F. W. Hoover, Prest., has plans by Thos. W. Gardener, Stahlman Bldg., Nashville, to remodel station. (Previously noted.)

Va., Norfolk.—Atlantic Coast Line R. R., J. E. Willoughby, Chief Engr., Wilmington, N. C., plans to improve passenger facilities; either improve passenger terminals at foot of Jackson St. or establish passenger terminal at foot of York St.

SCHOOLS

Ala., Highland Home.—State will erect addition to and alter Crenshaw County high school; bids opened; Frederick Ausfeld, Archt., Montgomery, Ala.; Wm. F. Feagin, State Supt. of Education, Montgomery. (Lately noted.)

Ark., Fountain Hill.—Trustees have plans by W. A. Halley, Monticello, Ark., for school; cost \$4000.

Ark., Grady.—Lincoln County School Board, Dist. No. 4, Fred. A. Wood, Secy., receives bids until Aug. 3 to erect frame school building; plans and specifications at C. E. Wood's store, Grady.

Fla., Delray.—Special Tax School Dist. No. 6 voted \$20,000 bonds to erect and equip school; H. W. Lewis, Supt. of Public Instruction, Palm Beach County, West Palm Beach, Fla.

Fla., Fort Lauderdale.—City voted \$12,000 bonds to erect concrete school at Davis and \$3000 bonds to erect addition to school in Dania Dist. Address Board of Public Instruction, Broward County.

Fla., Kissimmee.—Osceola County Board of Public Instruction let contract to Frank Bass, Kissimmee, to erect frame schools at Bull Creek, Bassville and Crab Grass.

Fla., Titusville.—Brevard County issued \$60,000 school bonds. Address County Clerk.

Ga., Camilla.—City is reported to have let contract to J. W. Middleton and J. M. Culpepper, Camilla, to erect addition to grammar school; brick; 2 rooms; cost \$3000.

Ga., Gainesville.—Brenau College will erect domestic science building; kitchen laboratory, dining room, sewing room and several bedrooms; completion by Sept. 12.

Ga., Metter.—City will erect \$9000 addition to school building. Address The Mayor.

Ga., Reynolds.—Trustees of Reynolds School Dist., through W. F. Weaver, Chrmn.,

receive bids until Aug. 9 to erect 12-room school and auditorium; steam heat; tin roof; plans and specifications at office of Mayor W. F. Reynolds and Nisbet, Brown & Dunwoody, Architects, Macon, Ga. (Lately noted to have voted \$20,000 bonds.)

Ky., Shelbyville.—School Board selected Joseph & Joseph, Louisville, as architects for high school; cost \$50,000. (Lately noted.)

La., Colfax.—Grant Parish School Board ordered vote Sept. 5 on taxes and bonds for schools as follows: Dry Prong Dist., \$10,000 bonds to erect school, also maintenance tax; Ward 2 and portion of Dist. 6 in Ward 3, tax for general purposes; Dist. 5, tax for general purposes; Nos. 8, 10 and 20; 21, 23 and 31; 16 and 16 (Ward 5); 12 and 26; tax for general purposes; Dist. 5, tax to build and equip schools.

La., Dry Prong.—Grant Parish School Board, Colfax, La., ordered vote Sept. 5 on \$10,000 bonds to erect school. (See La., Colfax.)

La., Jennings.—City plans to issue \$40,000 bonds to erect high school. Address The Mayor.

Md., Baltimore.—St. Peter's Church, Rev. Thos. J. Kenny, Pastor, will erect parochial school on Poppleton St.; 3 stories; 75x75 ft.; auditorium in basement to seat 800; granite up to first story with tapestry brick above; terra cotta limestone trimmings; cost \$50,000; Murphy & Olmsted, Architects, 1413 H. St., N. W., Washington, D. C.

Md., Cumberland.—Allegany County Board of Education, John S. McCauley, Prest., 7 Union St., receives bids until Aug. 5 to erect 2-story brick additions to Green Street High and Pennsylvania Avenue schools; plans and specifications at office School Comms. and George F. Sansbury, Archt., Cumberland. (Lately noted.)

Md., LaVale.—Board of Education of Allegany County, 7 Union St., Cumberland, Md., receives bids until Aug. 10 to erect school; 1 story; 3 rooms; tile and stucco; slate roof; wood floors; steam heat; electric lights; cost about \$5000; plans and specifications at office Wright Butler, Archt., Cumberland, and office of Board as above.

Md., Westernport.—Board of Education of Allegany County, 7 Union St., Cumberland, Md., receives bids until Aug. 10 to erect 2-story brick addition to high school; plans and specifications at offices of Geo. F. Sansbury, Archt., Cumberland, and office of Board as above.

Md., Westminster.—Westminster Theological Seminary has plans by Paul Reese, Westminster, for building; 105x50 ft.; brick and stone; slate roof; wood and concrete floors; steam heat; electric lights; cost \$35,000. Address architect.

Miss., Spaulding.—Jasper County Supvs. ordered vote on school bonds in Clairborne Consolidated School Dist. Address Chrmn. Board of Supvs. of Jasper County.

Mo., Independence.—Independence Board of Education ordered vote Aug. 10 on \$35,000 bonds to supplement \$75,000 bonds previously voted to erect William Chrisman High School. Address The Mayor.

Mo., Moberly.—Board of Education receives bids until Aug. 10 to erect addition to high school; 2 stories; 105x75 ft.; cost \$40,000; W. H. Saylor, Archt., 606 Gumble Bldg., Kansas City, Mo. (Previously noted.)

N. C., Asheville.—City Comms. open bids Aug. 15 to erect high school; plans and specifications at office W. H. Lord, Archt., Asheville, or may be examined at City Hall; 207x145 ft.; reinforced concrete frame; brick and tile walls; built-up composition roof; terra-cotta tile floors with reinforced joists and top; conduit wiring for city lighting; cost \$165,346. (Lately noted to open bids Aug. 1.)

N. C., Cornelius.—County Board of Education, Charlotte, N. C., lets contract Aug. 7 to erect school for which \$15,000 bonds were previously voted.

N. C., Grifton.—Grifton Graded School Trustees receive bids until Aug. 15 to erect 2-story brick school building; plans and specifications at office County Supt. of Schools, Greenville, N. C., and Frank K. Thomson, Masonic Temple, Raleigh, N. C.

N. C., Helena.—Flat River and Mt. Tirzah townships of Person-co District voted tax to erect school near Helena. Address Dist. School Trustees.

N. C., Enfield.—Enfield Graded School Dist. has plans by Benton & Benton, Wilson, N. C., for school; 2 stories; 15 rooms and auditorium; brick; slate roof; wood floors; electric lights; bids opened Aug. 10; cost \$21,900. Address architects.

Okla., Tulsa.—Board of Education, H. O. McClure, Prest., will erect 2-room unit addition to Longfellow School, including plumb-

ing and ventilating; bids opened July 31. (Lately noted.)

S. C., Anderson.—School Trustees will erect "L" to Glenn Street School; 2 classrooms; 26x24 ft.; brick veneer; also repair ceilings of North Fant Street School; W. P. Wright, J. Cliff Green and others, Com.

S. C., Midway.—School Trustees will erect 2-story school building; voted tax.

S. C., Woodford.—Trustees School Dist. No. 64 receive bids until Aug. 8 to erect frame school; plans and specifications at office A. Z. Stroman, Chrmn. Board of Trustees.

Tenn., Chattanooga.—City, E. D. Herron, Commr., receives bids until Aug. 7 to erect junior high school at Main and Kelly Sts.; 153x128 ft.; brick; tar and gravel roof; direct-indirect steam heat; cost \$40,000; plans and specifications at office Clarence T. Jones and Charles E. Bearden, Architects, Chattanooga, and at Builders' Exchange. (Lately noted.)

Tenn., Knoxville.—Board of Education has plans by L. C. Waters, Knoxville, for school at Hall's Cross Roads; 2 stories and basement; 80x90 ft.; frame and brick veneer; gravel roof; wood floors; steam heat; electric lights; cost \$12,000 to \$14,000; contract let about Aug. 10. Address architect. (Lately noted.)

Tenn., Nashville.—Board of Education is having plans prepared by Asmus Norton, Nashville, for Warner school; cost about \$100,000.

Tenn., Newport.—Cocke County voted \$30,000 bonds to erect high school. Address County Comms.

Tex., Addison.—School Board, A. R. Needham, Prest., will erect school building.

Tex., Fluvanna.—School Board has plans by R. S. Glenn, Sweetwater, Tex., for school; 60x78 ft.; brick; tar roof; concrete and wood floor; Smyth heating system; cost \$9000; gas lighting, \$250; concrete sidewalk, \$200; contract let about Aug. 5 or 10. (Lately noted.)

Tex., Harrisburg.—School Board has plans by F. S. Glover & Son, 612 Binz Bldg., Houston, for 2 story and basement brick addition to high-school building; bids opened July 31.

Tex., Marlin.—City is having plans prepared by C. D. Hill & Co., Dallas, for proposed school; will soon call for bids.

Tex., Voss.—Building Com. of School Trustees opens bids Aug. 7 to erect lately noted school; 69.10x63.5 ft.; natural stone; metal shingle roof; wood floors; ventilating stoves; cost \$5000; J. P. Caldwell, Archt., Coleman, Tex. Address Building Com. or architect. (See Machinery Wanted—School Supplies.)

Va., Luray.—Shenandoah Iron Works Dist. No. 1 School Board opens bids Aug. 10 to erect schools as follows: Newport, 4 rooms; Grove Hill, 6 rooms; Verbeena, Nauman and Comer, 2 rooms each; Jollett, Concrete, Honeyville and Lucas Hollow, 1 room each; plans and specifications at office Supt. John H. Booton, Luray. (Lately noted.)

W. Va., Ceredo.—Board of Education of Ceredo Dist. will erect 4-room addition to Westmoreland School.

W. Va., Gap Mills.—Board of Education of Sweet Springs Dist., G. N. Neel, Secy., receives bids until Aug. 8 to erect high school building; plans and specifications at office O. C. Rowan, Prest., Board of Education. (Lately noted to receive bids until June 17.)

W. Va., Kermitt.—Board of Education, Dr. R. M. Akers, Secy., issued \$15,000 high school bonds.

STORES

Ark., Gillett.—Devore & Sanders will erect store building.

Ark., Little Rock.—W. O. Wendler will expend \$6000 to remodel 2-story brick building.

Fla., Miami.—James Gilman will erect business building.

Fla., Miami.—John Sewell & Bro. have plans by Geo. L. Pfeiffer, Lemon City, Fla., for addition to business building; terra-cotta store front; 1 story; elevator; cost \$28,000; day labor. Address owner or architect.

Fla., Tampa.—F. H. Allen will erect store building; cost \$12,000; F. J. Kennard, Archt., Tampa.

Fla., West Palm Beach.—Palm Beach Mercantile Co. has plans by Geo. L. Pfeiffer, Lemon City, Fla., for addition to building; 3 stories; 50x150 ft.; steel framing; hollow tile walls; passenger and 2 freight elevators; cost \$32,000; day labor; owner will purchase materials; construction begun. (Noted in June.)

Ga., Albany.—Georgia Commission Co. will erect business building.

Ga., Atlanta.—George H. Boynton has plans by L. J. Hill, Atlanta, for 2-story and basement building; cost \$8000; day labor.

Ga., Atlanta.—Floyd McRae will expend \$4000 to alter building at 154 Decatur St.

Ga., Columbus.—Sol Loeb is reported to erect building to contain 3 stores.

Ga., Columbus.—Homer Gray is receiving bids to erect theater and store building. (See Theaters.)

Ga., Macon.—Mrs. H. C. Bagley is receiving bids to remodel store and office building; brick; metal roof; electric fixtures; cost \$4000; Curran R. Ellis, Archt., Ellis Bldg., Macon.

Ga., Quitman.—I. N. Johnson, Manchester, Ga., will erect building to contain 2 stores.

Ga., Rome.—E. G. Peters will erect \$14,000 building on Broad St.

Ky., Ashland.—Wm. Meade has plans by W. B. Smith, Huntington, W. Va., for store and apartment building; bids opened July 29.

La., Natchitoches.—J. H. Williams will soon open bids to erect store, office and opera house building. (See Theaters.)

Md., Baltimore.—Joseph Brodie will erect theater and 2 stores. (See Theaters.)

Mo., Joplin.—Dubuque Realty Co. has plans by A. C. Michaels, Miners Bank Bldg., Joplin, for 5-story department store; bids opened Aug. 2.

Mo., Kansas City.—Nicholas Miller will erect 1-story brick store building; cost \$3500.

Mo., St. Louis.—Pellgreen Construction Co., Grand and Park Aves., will erect office and store building; 5 stories; fireproof; 35,000 sq. ft. store space; cost about \$125,000.

N. C., Greensboro.—Myers Co. will remodel, redecorate and erect 2-story 30-ft. addition to department store.

N. C., Whiteville.—A. F. & A. M. will erect lodge and business building. (See Association and Fraternal.)

Okla., Cashion.—C. F. Knight Hardware Co. will probably erect building to replace burned structure.

Okla., Cashion.—Charles Price will erect store building to replace structure damaged by fire.

Okla., Cashion.—I. Stone Drug Co. is reported to rebuild burned structure.

S. C., Greenville.—J. O. Jones and H. B. Bates are having plans prepared by H. Olin Jones, Greenville, for business building; 2 stories and basement; 42x55 ft.; white brick front; cost \$8000 to \$10,000.

S. C., Greenwood.—M. E. Abrams has plans by J. E. Sumner and J. C. Hemphill, Greenwood, for store building; 50x100 ft.; mill construction; Johns-Manville asbestos roof, cement floors; cost \$10,000.

S. C., Saluda.—B. W. Crouch will erect store building to replace structure lately noted damaged by fire; 25x125 ft.; brick; standard walls; 1 story; metal roof; double wood floors; electric wiring; cost about \$5000.

S. C., Whitmire.—Miller Bros. will erect store building; 60x82 ft.; brick; metal roof; wood floors; cost \$7000 to \$10,000; construction begins about Oct. 15. (Lately noted.)

S. C., Whitmire.—J. P. Major will erect \$8000 store building; J. E. Summers, Archt., Greenwood, S. C.

S. C., Greenwood.—E. F. Giles is having plans prepared by J. E. Summers, Greenwood, for store building; cost \$3500.

Tenn., Nashville.—Union Realty Co. will expend \$10,000 to remodel building at 316-18 Union St.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Ark., Little Rock.—Carl estate let contract to Thalvan & Reed, Little Rock, to convert 2-story brick residence into apartment-house; 2 apartments of 6 rooms; stucco and brick; garage in rear.

Fla., Miami.—W. T. Carter let contract to erect store and apartment building. (See Stores.)

Fla., Miami.—Chas. Brickell let contract to St. Johns Construction Co., Miami, to erect apartment-house; 54x117 ft.; 3 stories, basement and roof garden; reinforced concrete, textile brick and wall tile and inserts; architectural ornaments; cement relief work; 23 suites; private restaurant, banquet and social hall in basement; electric lights; electric stoves; hot-water heat; elevator; house telephones; hardwood and

Tex., Beaumont.—W. C. Tyrell and J. C. Wilson have plans by F. W. Steinman & Son, Beaumont, for business building; 126x110 ft.; 2 stories; press brick and white enamel brick; Barrett specification roof; concrete, tile and wood floors; city lighting; Otis hand-power elevator; cost \$30,000; bids opened July 31. Address architects.

Tex., El Paso.—R. E. McKee will erect building on S. Santa Fe St.; cost \$3000.

Va., Alexandria.—C. R. Yates will erect building to replace Alexandria Coffee Co.'s structure lately noted damaged by fire; brick; metal roof; wood floors; steam heat; electric lights; hand elevators; cost \$3000.

Va., Highland Springs.—I. O. O. F. No. 78 will erect lodge and store building. (See Assn. and Frat.)

W. Va., Hutchinson.—Consolidation Coal Co., Continental Bldg., Baltimore, Md., is reported to erect store building.

Va., Newport News.—J. V. Bickford, Newport News, and M. A. Finn, Petersburg, Va., will erect 3 bulk stores on E. Queen St.

THEATERS

Ga., Columbus.—Homer Gray is receiving bids to erect theater and store building; brick; cost \$3000.

Ga., Griffin.—A. L. McKeeley will remodel Electric Theater for moving-picture theater.

La., Natchitoches.—J. H. Williams has plans by Edw. F. Nield, Shreveport, La., and will soon open bids to erect opera house, store and office building; 107x104 ft.; brick and stone; gravel roof; concrete floors. (Noted in June.)

Md., Baltimore.—Joseph Brodie, 1118-22 Light St., will erect moving-picture theater; seating capacity 1800 to 2000; also erect store on either side main entrance; cost \$100,000.

Tenn., Nashville.—Crescent Amusement Co., Tony Sudekum, Mgr., is having plans prepared by Marr & Holman, Nashville, for moving-picture theater; reinforced concrete; ventilating system; cost \$100,000.

WAREHOUSES

Ky., Lexington.—Lexington Bonded & Storage Warehouse Co. will erect tobacco warehouse; 114x270 ft.; steel and steel sheeting; steel and iron roof; concrete floors; cost about \$15,000; bids opened about Aug. 1. Address W. L. Petty, Prest.

La., Jennings.—W. Krielow has plans by I. C. Carter, Lake Charles, La., for warehouse; 200x122 ft.; brick and concrete; composition built-up felt or asbestos roof; wood floors; electric lights; cement sidewalks; recent bids rejected; cost \$18,000; construction begins in Aug. Address owner. (Previously noted.)

Md., Baltimore.—Samuel E. D. Stuart, 1418 Mt. Royal Ave., will erect warehouse at 21 E. Lombard St.; 5 stories and basement; reinforced concrete.

Miss., Greenwood.—Wade Hardware Co. will erect warehouse.

Tex., San Antonio.—Texas Refining Co. will erect seedhouse and office building; cost \$9000.

Va., Norfolk.—Security Storage & Safe Deposit Co. opens bids Aug. 8 to erect warehouse; 4 stories; concrete; fireproof; metal windows; steel sash; rolling steel doors; 81.4x181.4 ft.; reinforced concrete; elevator; chutes; sprinkler system; cost \$75,000 to \$100,000; Neff & Thompson, Architects, Norfolk. (Previously noted.)

W. Va., Beckley.—Raleigh Hardware Co. will erect warehouse; 125x83x87 ft.; stone and concrete; gravel roof; concrete floors; cost \$10,000; plans and construction by owner. (Lately noted under stores.)

tile floors; fireproof partitions; cost, exclusive of furniture and equipment, \$58,000; plumbing, electric work, fixtures, hardware, screens and furniture not let; architect or owner will receive correspondence and proposals; foundation completed; Geo. L. Pfeiffer, Archt., Miami. (Lately noted.)

Ga., Atlanta.—Mrs. J. W. Feeney, 111 Peachtree Pl., let contract to Fulton County Home Builders, 529 Candler Bldg., Atlanta, to erect double apartments at 123 Peachtree Pl.; 35x50 ft.; frame; composition shingle roof; wood floors; hot-air heat; cost \$6000. Address contractors.

Okla., Oklahoma City.—M. B. Sears let contract to Benj. Horst, Oklahoma City, to erect apartment-house; 42x44 ft.; frame and brick veneer; shingle roof; pine floors; gas heat; electric lights; cost \$5000; P. H.

Weathers, Archt., Oklahoma City; construction begun.

Tex., Port Arthur.—J. M. Watson let contract to erect store and apartment building. (See Stores.)

W. Va., Wheeling.—Mrs. Sara J. Thomas let contract to Geo. T. Reed, 1511 Wood St., Wheeling, to erect flats at 2419 Eoff St.; 45x85 ft.; brick and stone; Philip Carey roofing; wood and tile floors; cost \$15,000; Geo. A. Ebeling, Archt., Wheeling. Address Contr. (Lately noted.)

BANK AND OFFICE

Ark., Stuttgart.—First National Bank let contract to P. J. Buerke, Stuttgart, to erect bank building; 20x100 ft.; brick and stone; asbestos roof; tile floors; cost \$5000. (Lately noted.)

Ky., Port Royal.—Citizens' Bank let contract to Casey-Force Co., New Castle, Ky., to erect brick bank building; 2 stories; cost \$6000.

Miss., Clarkdale.—Waddell Cotton Co. let contract to erect store and office building. (See Stores.)

Tex., Dallas.—City National Bank let contract to H. J. Curtis, Dallas, to erect addition to bank building; 42x100 ft.; fireproof; composition roof; reinforced concrete floors; steam heat; electric wiring; electric elevator; cost \$125,000; Hubbell & Greene, Archts., Dallas. Address Contr.

CHURCHES

Ga., Atlanta.—Rush Memorial Congregational Church let contract to R. E. Pharrow, Atlanta, to erect Sunday-school building; cost \$6000.

Md., Warren.—Warren M. E. Church let contract to J. W. Fendley, Cockeysville, Md., to erect Sunday-school addition and 2 porch entrances; 25x36 ft.; stucco and stone; wood shingle roof; pine floors; hot-air heat; electric lights; cost \$3900; Bayard Turnbull, Archt., 328 N. Charles St., Baltimore.

Okla., Shawnee.—First Methodist Church will let contract in September to erect building; brick and stone; ordinary construction; art and florentine glass; pipe organ; steam heat; electric lights; cost \$25,000; Hawk & Parr, Archts., Oklahoma City. (Noted in June.)

Va., Mt. Ida.—St. Rita's Catholic Church let contract to Julian D. Knight, Alexandria, Va., to alter building.

CITY AND COUNTY

Tex., Seadrift.—City Hall.—City let contract to Ed H. Harrell Co., Houston, to erect city hall; plans include rest and recreation rooms, shower baths, public reading-room, auditorium, etc.

COURTHOUSES

Tex., Sweetwater.—County Commrs. let contract to W. P. Berry & Co., Lufkin, Tex., to erect courthouse; fireproof; cost \$60,000; C. H. Page & Bro., Archts., Austin, Tex. (Lately noted.)

DWELLINGS

Ala., Tuscaloosa.—F. J. Cramton & Co., Tuscaloosa, have contract to erect 4 dwellings on University of Alabama campus for professors; cost about \$4000 each; Frank Lockwood, Archt., Montgomery, Ala.

D. C., Washington.—D. H. Drury let contract to J. W. Powell, 628 6th St. N. E., Washington, to erect three 2-story residences; brick; cost \$9600.

D. C., Washington.—Thomas H. Yeager let contract to P. V. Mitchell & Co., 1413 G St. N. W., Washington, to erect residence, 5409 1st St.; also erect residence at 34 Longfellow St.; J. Hensley Hoffman, Archt., 642 G St. N. E., Washington; cost \$5800.

Fla., Eau Gallie.—Capt. W. Harner, Olean, N. Y., let contract to Ginter Bros., Eau Gallie, to erect residence.

Fla., Eau Gallie.—G. H. Strong, Olean, N. Y., let contract to Ginter Bros., Eau Gallie, to erect residence.

Fla., Daytona.—Dr. Frederick J. Walter let contract to Fuquay & Green, Daytona, to erect residence; 54x48 ft.; ordinary construction; Coquina stone walls; tile roof; wood and tile floors; gas heat; J. Fletcher Street, Archt., Philadelphia, Pa. Address contractor.

Fla., Pensacola.—Mrs. Clark let contract to J. M. Avona, Pensacola, to erect residence; 29x41 ft.; bungalow style; frame; patent asphalt shingles; electric lights; Wm. W. Alfred, Archt., Pensacola.

Fla., St. Augustine.—J. T. Dismukes, Prest., First Natl. Bank, let contract to erect resi-

dence; 2½ stories; 33x61 ft.; brick and stucco; red tile roof; Fred A. Hendrich, Archt., St. Augustine. Lately noted.)

Ga., Atlanta.—Mrs. John T. Moody let contract to W. A. Brightwell, 304 Candler Bldg., Atlanta, to erect residence; frame; slate roof; cost \$8000; Hentz, Reid & Adler, Archts., Atlanta.

Ga., Augusta.—Geo. R. Lombard let contract to Silbert & Robinson, Augusta, to erect residence; 2 stories; cost \$7500.

Ga., Augusta.—L. L. Arrington let contract to A. Shirley, Augusta, to erect residence; hollow tile; 6 rooms; garage; cost \$5500; Thos. M. Campbell, Archt., Augusta. (Lately noted.)

Ga., Valdosta.—J. H. Harley let contract to J. L. Redding, Valdosta, to erect bungalow; cost \$5500; Lloyd Green, Archt., Valdosta.

Ky., Lexington.—Miss Carrie Brown let contract to Chinn & Lawwill, Lexington, to erect 10-room stucco residence.

Ky., Lexington.—H. E. McEldowney let contract to Chinn & Lawwill, Lexington, to erect 7-room brick bungalow.

Ky., Lexington.—Dr. Will Stuckey let contract to Chinn & Lawwill, Lexington, to erect residence; colonial style; 9 rooms.

Md., Baltimore.—I. Few McCully, 10 E. Fort Ave., let contract to P. H. Guttman & Co., 1536 N. Gay St., Baltimore, to erect dwelling and undertaking establishment; 30x28 ft.; ordinary masonry construction; tin roof; wood floors; electric wiring; cost \$3000; hot-water heat, \$400; R. H. Englehardt, Archt. Address Contrs. (See Machinery Wanted—Iron Work.)

Md., Baltimore.—Citico Realty Co. has plans by and let contract to Stanislaus Russell, 2900 Clifton Ave., Baltimore, to erect eleven 2-story residences, 3639-3659 Cottage Ave.; 21½x107 ft.; steam heat; cost \$18,000.

Md., Baltimore.—Edward H. Beyer has plans by Lawrence Ott and let contract to L. Schoenhelm, Jr., 306 St. Paul St., Baltimore, for two 2-story frame cottages at Dalrymple and Oakfield Aves.; steam heat; 26x30 ft.; cost about \$5600. (Lately noted.)

Md., Brooklyn.—John Flood is reported to have let contract to J. Henry Smith, 1426 Light St., Baltimore, to erect residence; cost \$10,000 to \$12,000.

Md., Havre de Grace.—Leonard Richards, New York, let contract to John F. Kunkel, 29 S. Linwood Ave., Baltimore, to remodel and erect addition to dwelling on Oakington property near Havre de Grace; Clyde N. Fritz, Archt., 1523 Munsey Bldg., Baltimore.

Md., Lonaconing.—Rufus Holzshu let contract to Marshall Bros., Lonaconing, to erect residence of 8 rooms on E. Main St., to be occupied by Louis N. Ranche.

Md., Lonaconing.—Miller Bros., LaVale, Md., let contract to D. A. Sloan, Lonaconing, to erect residence; 28x34 ft.; asbestos shingles; hardwood floors; cost \$3000; gas heat; electric lights; plans by owner; construction begun.

Mo., St. Louis.—J. Poepperling let contract to W. Hofschwelle, St. Louis, to erect 2-story residence; cost \$3800.

N. C., Henderson.—Ransom H. Duke let contract to W. H. Fogleman, Henderson, to erect residence; 8 rooms; bungalow style; shingle roof and half of exterior shingled; cost \$4500.

N. C., Murfreesboro.—Rugby Development Co. let contract to John A. Merriman, Murfreesboro, to erect first of 20 residences in Rugby Subdivision; bungalow type; cost \$4000; Regan & Weller, Archts., Murfreesboro.

N. C., Statesville.—Dr. Ross McElwee let contract to U. A. Ostwalt, Statesville, to erect residence; 10 rooms; hollow tile walls stuccoed; tile roof; hardwood floors; tile bath room floors; hot-water heat; cost \$15,000; Louis H. Asbury, Archt., Charlotte, N. C.

N. C., Warrenton.—C. R. Rodwell let contract to W. H. Fogleman, Henderson, N. C., to erect residence; metal shingle roof; cost \$3000.

S. C., Greenwood.—J. C. Harper let contract to Samuel Baker, Greenwood, to erect residence; 70x50 ft.; ordinary frame construction; Carey asphalt tile shingle roof; cost \$6000; hot-air heat, \$400; J. E. Sumner and J. C. Hemphill, Archts., Greenwood.

Tenn., Friendship.—Ben F. Hall let contract to erect residence.

Tenn., Nashville.—A. S. Weinbaum, 1902 West End Ave., will erect residence; 8 rooms; brick; composition shingle roof; hardwood floors; cost \$5000; hot-air heat, about \$250; concrete work, \$150; plans by owner; contracts let in different parts. (Lately noted.)

Tex., San Augustine.—John D. Clark let contract to S. G. Chumley, San Augustine, to erect residence; frame; metal shingle roof; sub-floor covered with flat grain pine; brick chimneys; cost \$3500; D. Rulf, Archt.; all materials purchased. (Lately noted.)

Va., Norfolk.—O. H. Brown let contract to F. C. Lowe, Norfolk, to erect residence; 2 stories; brick and tile; cost \$5000.

W. Va., Idamay.—Consolidation Coal Co., Continental Bldg., Baltimore, Md., let contract to Kissner Bros. to erect 50 dwellings.

GOVERNMENT AND STATE

Miss., Jackson.—Capitol.—State let contract for steel construction work in rebuilding old Capitol to Bright & Co., St. Louis, and for steel to American Bridge Co., New York; cost \$42,995; contracts let include steel, erecting same, reinforced concrete work, including roof; contracts for interior work, decorations, etc., not let.

HOSPITALS, SANITARiums, ETC.

Ga., Atlanta.—Grady Hospital Trustees, R. J. Lowry, Prest., let contract to Griffin Construction Co., Atlanta, to erect reinforced concrete skeleton frame and other work in conjunction therewith for nurses' home, Grady Hospital; Alexander Blair and Eugene C. Wachendorf, 827 Empire Bldg., Asso. Archts., Atlanta.

Ky., Lexington.—Fayette County let contract to Frank Corbin, Lexington, to erect service building at tuberculosis hospital; 54x55 ft.; brick; stone trimmings; tile roof; wood floors; cost \$15,000; steam heat, \$3500; fixtures and wiring, \$750; Anderson & Frankel, Archts., Lexington. (Lately noted.)

Tenn., Chattanooga.—Pine Breeze Sanitarium let contract to Adams & Schneider, Chattanooga, to erect 6 buildings, to include children's ward, playroom, restroom, kitchen, dining-room and laundry. (Lately noted.)

Va., Petersburg.—Central State Hospital let contract to Rust Engineering Co., Birmingham, Ala., to erect brick stack 125 ft. high at power plant; to Mayo Engine and Boiler Works, Erie, Pa., for 300-horse-power boiler; L. M. Danison, to erect brick annex for male tuberculosis patients. (Lately noted.)

HOTELS

Fla., Melbourne.—L. G. McDowell, Mgr., Hathaway Inn, Deal Beach, N. J., let contract to V. C. Grant, Daytona, Fla., to remodel Carlton Hotel; will install additional plumbing, etc.

MISCELLANEOUS

Ga., Eastman.—Fair.—Dodge County Fair Assn. let contract to Lewis & Sanders, Eastman, to erect fair buildings, three 24x100 ft. and three 59x187 ft., 36x68 ft. and 36x124 ft.; for agricultural building, woman's building, machinery building, cattle, swine and poultry sheds and grandstand; wood frame; concrete foundations; composition roof; wood floors; cost \$6000; E. C. Hosford & Co., Archts., Eastman.

Ga., Valdosta.—Fair.—Georgia-Florida Fair Assn. let contract to J. W. Lanier, Valdosta, to remodel and erect additions to livestock buildings; frame; composition roof, improve racetrack, etc.

Md., Baltimore.—Undertaking Establishment.—I. Few McCully, 10 E. Fort Ave., let contract to erect dwelling and undertaking establishment. (See Dwellings.)

Md., Baltimore.—Clubhouse.—Maryland Jockey Club, 300 Equitable Bldg., let contract to Cowan Building Co., 106 W. Madison St., Baltimore, to improve building at Pimlico; Mottu & White, Archts., 322 N. Charles St., Baltimore. (Lately noted.)

S. C., Charleston.—Home.—St. Margaret's Home let contract to McCrady Bros. & Cheves, Charleston, to erect home; 110x50 ft.; frame; tin roof; wood floors; cost \$12,000; hot-water heat, \$1000; Otis invalid elevator; J. D. Newcomer, Archt., Charleston. (Lately noted.)

Tex., San Antonio.—Cotton Platform.—San Antonio Compress Co. let contract to C. M. Webb, to erect cotton platform; about 38,000 sq. ft.; frame; Johns-Manville asbestos (Brooks 3-ply) roofing; wood floors; cost \$11,000; F. A. Newman, Archt., Central Office Bldg., San Antonio. (Lately noted.)

Tex., San Antonio.—Clubhouse.—San Antonio Country Club let contract to Coleman & Jenkins to erect clubhouse; Martin Wright, for electrical work; West & Gutzeit, plumbing; all of San Antonio; plans by Geo. Willis, San Antonio, call for fireproof structure; stucco; 1 and 2 stories; outdoor swimming pool; 30x75 ft.; cost about \$60,000. (Lately noted.)

RAILWAY STATIONS, SHEDS, ETC.

Okla., Ardmore.—Gulf, Colorado & Santa Fe Ry., P. Merritt, Chief Engr., let contract to H. D. McCoy, Ardmore, to erect freight station to replace burned structure; brick and reinforced concrete; fireproof; 32x294 ft. (Lately noted.)

S. C., Charleston.—Atlantic Coast Line R. R., J. E. Willoughby, Chief Engr., Wilmington, N. C., let contract to T. J. Rose, Rocky Mount, N. C., to erect brick passenger and freight stations; 28x72 ft. and 40x80 ft., respectively; former, asbestos roof; latter, built-up roof; tile floors; stoves; electric lights from local plant; G. M. Polley, Archt., Wilmington, N. C. (Lately noted.)

SCHOOLS

Ala., Fort Payne.—City let contract to Jack Chittwood, Fort Payne, to erect school; brick; wood floors; electric lights; cost \$3000. (Previously noted.)

Ala., Repton.—School Board let contract to W. E. Ward, Pinnacle, Ala., to erect addition to school building.

D. C., Washington.—Mount Vernon Seminary let contract to Boyle-Robertson Construction Co., 1516 H St., Washington, to erect school buildings; main building quadrangular shape; 216x236 ft.; 2 stories, attic and basement; fireproof; red brick; slate roof; accommodate 150 students; separate building for power plant, laundry, garage, etc.; cost \$300,000; Wesley S. Bessell, 15 E. 40th St., New York; completion by June, 1917; Mrs. A. G. Hensley, Principal.

Fla., Cocoa.—Board of Public Instruction, Titusville, Fla., let contract to Florida Schub Concrete Co., Jacksonville, to erect lately noted high and graded school; 2 stories; reinforced concrete; fireproof; concrete roof; concrete floors with wood cover in classrooms; cost \$40,000; Mark & Sheftall, Archts., Jacksonville. Address Edwin E. Macy, Eau Gallie, Fla. (See Machinery Wanted—Laboratory Equipment; Heating Plant.)

Fla., Marianna.—Jackson county let contract to Fred Wagoner, Marianna, to erect 4-room addition to high school.

Fla., St. Petersburg.—Southland Seminary let contract to L. E. Rising, St. Petersburg, to erect girls' school; tile and stucco; Reynolds shingle or tile roof; Spanish tile and wood floors; gas heat; city electric lights; cost \$50,000; Henry H. Dupont, Archt., St. Petersburg. H. Walter Fuller is interested.

Fla., Tampa.—St. Louis Catholic Benevolent & Educational Association let contract to G. A. Miller, Tampa, to complete Sacred Heart College; 3 stories; 60x100 ft.; concrete; tile roof; cement and tile floors; city lighting; cost \$60,000; Fort & Parslow, Archts., Tampa. (Lately noted.)

Ga., Macon.—Murphy Building Co., Macon, general contractor to erect Vineville School, let contract for electric wiring to Morris Putzel, Macon; plans by Curran R. Ellis, Macon, call for 2-story brick structure; 20 rooms; accommodations for 700 students. (Contract lately noted let for heating and plumbing.)

La., Stonewall.—De Soto Parish School Board let contract to Stewart McGee, Little Rock, Ark., to erect school; brick; cost \$22,000; Nield & Oscher, Archts., Shreveport, La. (Previously noted.)

Md., Rockville.—Montgomery County School Commrs., W. B. Burdette, Secy., let contract at \$14,111 to Harry G. Howes, Rockville, to erect addition to high school; 2 stories with basement; 8 rooms; assembly hall, etc.; 58x72 ft.; brick; tin shingle roof; wood floors; electric wiring; heating plant to cost about \$1300; R. W. Talbott, Archt., Rockville. (Noted in May.)

Miss., Ethel.—Town let contract to Charley Bell, Kosciuska, Miss., to erect school; 2 stories; 58x72 ft.; brick; galvanized shingle roof; wood floors; cost \$5000; Hedges & Shoats, Archts., Meridian, Miss. (Lately noted.)

Miss., Meridian.—Separate School Dist. let contract to Dabbs & Wetmore, Meridian, to erect school; 50x50 ft.; 2 stories and cellar; brick; tar and gravel roof; wood floors; cost \$11,000; heating, \$700; P. J. Krouse, Archt., Meridian. (Previously noted.)

N. C., Walnut Cove.—School Com. C. E. Davis and others, let contract to J. R. Voss, Walnut Cove, to erect lately-noted school; 2 stories; 53x30 ft.; vestibule 10x30 ft.; brick; galvanized-shingle roof; rift-pine floors; steam heat; electric lights from local plant; cost \$3500. (See Machinery Wanted—Roofing; Heating Plant.)

S. C., Greenville.—Trustees let contract to Jamison & Morris, Greenville, to erect 4-room addition to Park School.

Tenn., Greenville.—Board of Education let contract to erect school building; 140x70 ft.; ordinary construction; composition roof; steam heat; cost \$25,000; Manley & Young, Archts., 625 Holston National Bank Bldg., Knoxville, Tenn. and Lexington, Ky. (Lately noted.)

Tenn., Harriman.—Board of Education. A. R. Davis, Secy., let following contracts to erect school for which \$50,000 bonds were voted: Solomon Construction & Engineering Co., excavation and stone and concrete foundation; Edgington Bros., sheet iron and metal work; Hill Bros., plumbing; Stowers Lumber & Manufacturing Co., lumber; Jesse Delozier, sand; Key City Coal Co., cement and lime, all of Harriman; John C. Vance & Co., Chattanooga, steel work; John Mansel & Co., Atlanta, roofing; Manley & Young, Archts., Holston National Bank Bldg., Knoxville, and Strand Theater Bldg., Lexington, Ky.; contracts for cut stone, hardware, glazing, heating, lighting and mill work not let. (Lately noted.)

Tenn., Nashville.—City let contract to G. W. McClanahan, Nashville, to erect addition to Ashcraft School, 23d Ave. and Batavia St.; frame; composition roof; pine flooring; cost \$4650. (Lately noted.)

Tex., Laredo.—School Board let contract to C. Jefferies, Laredo, to erect high school; 2 stories and basement; brick; concrete halls; wood joists and floors; Barrett specification roof; electric lights; cost \$34,000; C. H. Page & Bro., Archts., Austin. (Lately noted.)

Tex., Tynan.—Skidmore School Dist. No. 2, Skidmore, Tex., let contract to T. L. Molloy, to erect school; 46x92 ft.; exposed interlocking tile construction; asbestos shingle roof; wood floors; room heaters; cost \$2990; Stephenson & Heldenfels, Archts., Beeville, Tex. (Previously noted.)

Va., Norfolk.—School Board let contract to Atkinson Building Co., Norfolk, to erect 1-story addition to Maury High School; cost \$2250; also 1-story addition to Moran and Omohundro schools; cost \$570.

Va., Rapidan.—Madison Dist. School Board let contract to C. W. Reynolds, Culpeper, Va., to erect 4-room school; frame; metal roof; cost \$3900. (Lately noted.)

STORES

Fla., Fort Myers.—H. E. Heitman let contract to erect store and theater building. (See Theaters.)

Fla., Miami.—S. H. Kress & Co., 350 Broadway, New York, let contract to L. V. Le Barre & Co., Birmingham, Ala., to erect store building; 3 stories; fireproof; steel and reinforced concrete; 50-ft. frontage; cost \$40,000 to \$50,000. (Lately noted.)

Fla., Miami.—W. T. Carter let contract to J. Noel, Miami, to erect Osceola Stores and Apartments; 54x100 ft.; 2 stories; reinforced concrete and hollow tile; composition roof; 6 stories; 8 apartments; no heating; electric lights; hot and cold water; cost \$22,000; plumbing, electric work, hardware fixtures, etc., open for proposals; Geo. L. Pfeiffer, Archt., Lemon City, Fla. (Lately noted.)

Fla., Pensacola.—J. R. Saunders let contract to S. P. Fulghum & Co., Pensacola, to erect store with warehouse in rear; mill construction; brick walls; patent roof; plate glass front; metal skylights; fireproof doors and windows; electric lights; Wm. W. Alfred, Archt., Pensacola.

Fla., West Palm Beach.—W. J. Dyer let contract to R. C. Bartholomew, West Palm Beach, to erect building; 60x26 ft.; concrete, tile and brick; plate glass front; provision for 2 additional stories.

Ga., Atlanta.—Mrs. Shorter Stewart, Eu- faula, Ala., let contract to G. H. Bray, 509 Candler Bldg., Atlanta, to erect 3 stories; 39x50 ft.; brick and frame; tar and gravel roof; cement floors; cost \$3500; C. E. Frazier, Archt., 1222 Candler Bldg., Atlanta. (Lately noted.)

Ga., Atlanta.—Olson Bros. let contract to W. E. Mashburn, Atlanta, to alter building at 41 Whitehall St.; cost \$4100.

Ga., Savannah.—B. Karpf let contract to J. B. Mock, Savannah, to remodel stores at 223-225 Broughton St.; cost about \$6000.

Ga., Washington.—J. S. Crouch let contract to J. B. Chafin, Washington, to erect brick store building.

La., Opelousas.—Aaron Jacobs, Mgr. Jacobs News Depot Co., let contract to T. F. McKinney, Opelousas, to erect store building; 52x65 ft.; brick; plastered walls; metal ceiling; concrete and cement floors; composition roof; electric lights; cost \$5000; T. G. Chachere, Archt. Address contractor. (Lately noted.)

Miss., Brookhaven.—C. S. Butterfield let contract to erect stores and moving-picture theater. (See Theaters.)

Miss., Clarksdale.—Waddell Cotton Co. let contract to Smith & Bobbitt, Memphis, Tenn., to erect 2-story building; 40x47 ft.; stores on first floor; offices above.

N. C., Fayetteville.—Dr. H. W. Lilly and F. H. Stedham let contract to T. T. Thain, Fayetteville, to erect 3-story store building; cost \$10,000; J. M. Kennedy, Archt., Raleigh, N. C.

N. C., Lumberton.—A. W. McLean let contract to S. A. Branch to erect 4 wholesale houses; 1 story; brick; 62x24 ft., 84x24 ft., 94x24 ft. and 107x24 ft.; railroad track in rear.

N. C., Raleigh.—Job P. Wyatt & Sons Co. let contract to Banon & Thompson, Raleigh, to erect business building, 3 stories, 61x150 ft., with 2-story warehouse in rear, 61x115 ft.; brick; steel frame; built-up composition roof; maple with sub-floors; cost \$35,000; 2 electric freight elevators, \$2000; John D. Briggs, Archt., Raleigh. (Previously noted.)

N. C., Warrenton.—T. V. Allen let contract to W. H. Fogleman, Henderson, to erect store building; 27x100 ft.; 2 stories; pressed brick; plate-glass front; metal ceiling; tin roof; cost \$6300.

S. C., Greenwood.—Mauldin & Chapman, Greenwood, have contract to alter building on Main St.; 30x120 ft.; cost \$3800; J. E. Summer and J. C. Hemphill, Archt., Greenwood.

Tex., Port Arthur.—J. M. Watson let contract to Fred Drunagie, Port Arthur, to erect store and apartment building; 25x100 ft.; 2 stories; brick and stone; plate-glass front; tile, concrete and wood floors; no heating; city electric lights; cement sidewalks; F. W. Steinman & Son, Archts., Beaumont, Tex.

Va., Covington.—C. A. Fudge let contract to C. B. Ergenbriht, Covington, to erect store building; 2 stories; 48 ft. wide; pressed brick. (Lately noted.)

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Baling Press.—Roddey Reid Garage, Rock Hill, S. C.—Press to bale waste paper.

Barrels.—A. L. Womack Co., Bristol, Tenn.—Car-load or more of barrels, similar to sugar barrels.

Bathroom Fixtures.—John T. Stevens, Kershaw, S. C.—Prices on bathroom tile and fixtures for \$20,000.

Bell.—J. C. Anderson, Secy. School Board, Box 53, Shirley, Ala.—School bell.

Beltting, etc.—J. P. Campbell, Jacksonville, Fla.—Cotton belting, rubber belt, cotton back band webbing, brass tubing, light angles, paint brushes, set screws, paint and manila rope.

Boiler.—Jonesboro Supply House, Jonesboro, Tenn.—35 H. P. boiler; vertical; for heating.

Boilers.—Eastern Machinery Co., Drake Bldg., Easton, Pa.—Water-tube boilers; second-hand; full description.

Boiler.—Manufacturers Selling Agency, P. O. Box 634, Birmingham, Ala.—Vertical boiler; 10 H. P.; 80 to 90 lbs. working pressure; complete with stack and fittings; second-hand; state best price delivered Birmingham; specifications and conditions.

Boiler.—Hackley Morrison, P. O. Box 120, Richmond, Va.—New or second-hand Scotch type internal furnace boiler; dry back preferred; 125 to 150 lbs. working pressure; prefers boiler of large diam. and short length.

Boilers.—See Laundry Machinery, etc.—Panama Canal.

Boiler.—Hackley Morrison, P. O. Box 120, Richmond, Va.—Marine type boiler; 15 H. P., 100 lbs. working pressure; new or second-hand.

Bricks.—H. F. Yates, Bishopville, S. C.—2000 Colonial bricks for fireplaces.

Brick Mantels.—W. A. Pepper, 918 S.

THEATERS

Fla., Fort Myers.—H. E. Heitman let contract to G. K. and E. M. Williams, Ocala, Fla., to erect arcade and motion-picture theater; 75x125 ft.; brick; Barrett specification, composition and tin roof; tile floors; city lighting; 15 stores; cost \$30,000; F. J. Kennard, Archt., Tampa. (Lately noted.)

La., New Orleans.—De Soto Realty Co. let contract to F. A. Petty, New Orleans, to erect Strand Theater; 2 stories; 3 mezzanine floors; seating capacity 2900; exterior white terra-cotta; concrete and steel; fireproof; roof vents and exhaust fans; indirect heating; vacuum cleaner; pipe organ; interior finished with Caen stone; dull black wrought-iron balustrades and fixtures; entrance finished in white marble; also contain 7 stores and 8 offices; leased to Saenger Amusement Co.; Favrot & Livaudais, Archts., New Orleans. (Previously noted.)

Miss., Brookhaven.—C. S. Butterfield has plans by and let contract to E. McCormick, Brookhaven, to erect moving-picture theater and store building; 58x130 ft.; 2 stories; brick; glass front; Barrett specification roof; wood and tile floors; heating and lighting not determined; cost \$19,000. (Lately noted.)

WAREHOUSES

Fla., Pensacola.—J. R. Saunders let contract to erect store and warehouse. (See Stores.)

Ga., La Grange.—Columbus Power Co., Columbus, Ga., let contract to Pike Bros. Lumber Co., La Grange, to erect brick warehouse; cement floor; tar and gravel roof.

La., New Orleans.—John T. Gibbons let contract to Julius Koch, New Orleans, to erect grain-storage warehouse; 3 stories; 140x125 ft.; reinforced concrete throughout; steel doors and windows; E. R. Bartholomew, Supt. of construction. See Flour, Feed and Meal Mills.)

N. C., Raleigh.—Job P. Wyatt & Sons Co. let contract to erect store and warehouse. (See Stores.)

chee Creek, near Foy's Mill and over Foy's Mill, and also bridge over White Oak Creek, both on Eufaula and Abbeville Rds.; bids received on steel bridge with concrete piers and floor or on reinforced concrete; all plans to be bid on must be on file with W. S. Keller, State Highway Engr., Montgomery, Ala., on or before Aug. 17; bids must be submitted on plans filed with State Engr.

Building Materials.—Alfonso Reveron, Dugas Bldg., Augusta, Ga.—Catalogues, samples and prices of building materials.

Building Materials.—Wise Granite & Construction Co., Richmond, Va.—Prices on following material for erection of Arlington Hotel at Washington, D. C.: Excavation; reinforcing steel; granite; limestone; ornamental and special iron work; ornamental terra-cotta; roofing and sheet metal; hollow and rolled metal windows and doors; interior partitions; plastering; interior marble and tile; millwork and interior finish; glass and glazing; painting; window and door screens; brick work; revolving doors; weather strips; structural steel.

Buttons.—See Textile Products.

Butter Machinery.—International Confectionery Co., Douglas, Ariz.—Data and prices on butter machinery.

Cable.—Helena Gas & Electric Co., W. J. O'Brien, Engr., Helena, Ark.—Prices on 3 conductor steel taped cable; No. 8 and 6 size conductors.

Cars.—Ell & Ell, care of Manufacturers Record.—6 dump cars, 2 tons capacity, 24-in. gauge; prefer Lakewood or similar cars; immediate shipment.

Cars.—R. K. Papin, 335 Locust St., St. Louis, Mo.—Two combination cars; 4 compartments; "Jim Crow" compartments preferred; painted and lettered; good condition.

Cement.—Henry River Mfg. Co., Henry River, N. C.—Best prices and delivery on Portland cement.

Chemicals, etc.—Arturo Cortella, via Giuseppe Pomba 14, Turin, Italy.—To correspond (relative to advertising and introduction of products) with manufacturers of perfumeries, chemical products, pharmaceutical preparations, aniline, colors, inks for writing and printing, and any kind of paper.

Chemicals, etc.—Amato y Chies, agents, 14 Marquos de Loganos, Madrid, Spain.—To represent manufacturers of chemicals and laboratory supplies; also novelties of various kinds.

Collars, Shirts, etc.—Manuel Perez, Egido No. 23, Habana, Cuba.—To represent manufacturers of shoes and foot coverings; shirts; collars; haberdashery; laces; novelties.

Copper (Sheet).—Benjamin Thompson, 224 American Bank Bldg., Tampa, Fla.—Prices on sheet copper for contemplated bid at Lexington, Ky., Aug. 8.

Cotton Machinery.—Jonesboro Supply House, Jonesboro, Tenn.—Two 12x6-in. 00-spindle shubbers.

Cranes (Traveling).—Sewerage and Water Board, F. S. Shields, Secy., Room 508, City Hall Annex, New Orleans, La.—Bids until Sept. 13 to furnish and erect in drainage pumping stations 2 traveling cranes of 15 tons capacity each; Contract No. 77-D; plans and specifications obtainable at Room 503, City Hall Annex; Geo. G. Earl, Gen. Supt.

Crucibles.—Winchester Repeating Arms Co., New Haven, Conn.—Quotations (from Southern manufacturers) on crucibles for melting brass; sizes 60 or 70.

Crusher.—The Harvey Co., 113 South St., Baltimore, Md.—No. 2½ Climax crusher; 10 to 20 opening.

Crusher.—Chas. M. Noble, 315 E. 22d St., Anniston, Ala.—Prices on second-hand gatory stone crusher (No. 5 preferred) and Williams stone pulverizer (No. 2 or 2XX preferred.)

Derrick.—Cumberland Natural Gas Co., Barboursville, Ky.—Guy derrick with 40-ft. boom; 10 tons capacity; new or second-hand.

Desks.—Rev. J. S. Henry, Cloverport, Ky.—Prices on 80 single desks Nos. 2-5 for school.

Dredging.—Comms. Harris Bayou Drainage Dist., Clarksdale, Miss.—Bids until Aug. 9 at office Maynard & Fitz-Gerald, Atty's., for 9000 cu. yds. ditch work to be done with teams or hand shovels; for further information address A. L. Dabney, Engr., Porter Bldg., Memphis, Tenn.

Electric Equipment.—John T. Stevens, Kershaw, S. C.—Prices on electric equipment for \$20,000 residence.

Electric-light Plants, etc.—Dixie Water & Light Co., Varina, N. C.—Data and prices on family electric light plants, water-works, acetylene gas lighting equipment, towers and overhead tanks, pneumatic tank pumps, engines, windmills, pump jacks, small dynamos, storage batteries, wire, electrical fixtures, etc.

Electrical Machinery.—See Water-works.—Tyler H. Stone.

Electrical Machinery.—Edward L. Boardman, 621 Riggs Bldg., Washington, D. C.—Two 50 H. P. and one 100 H. P., 220 volt. 3 phase, 60 cycle, moderate speed, A. C. current motors.

Electrical Specialties.—See Push Buttons.

Elevator.—See Machine Tools, etc.—Bureau, Supplies and Accounts.

Engine.—Yellville Machine Shops & Foundry Co., Yellville, Ark.—10 H. P. gasoline engine; new or second-hand.

Engines.—See Electric-light Plants, etc.—Dixie Water & Light Co.

Engine.—Duell Wright, Mgr., Jackson, Ala.—Steam engine to drive lighting plant; 4-cylinder engine or Corliss type; 70 to 75 H. P.

Engines.—United States Engineer's office, St. Louis, Mo.—Bids until Aug. 16 to furnish 1 pr. tandem compound condensing engines for stern paddle wheel steam tow-boat.

Excavating Machinery.—Wm. T. Bryan, Rabun Gap, Ga.—Addresses of manufacturers of trench cutting machinery.

Flooring.—John T. Stevens, Kershaw, S. C.—Prices on hardwood flooring for \$20,000 residence.

Flooring.—R. E. Gilmore, Post, Tex.—Prices on tile floors.

Flooring.—H. F. Yates, Bishopville, S. C.—Inlay hardwood parquet floors for 4 rooms.

Glass.—L. O. Bruton, Prest. Bankers' Trust & Audit Co., Monticello, Ga.—Plate glass to insert in floor; transmit light to second floor.

Hammer (Pneumatic).—Vulcan Iron Works, 909 E. Bay St., Jacksonville, Fla.—Electric driven air hammer for blacksmith shop.

Hardware.—See Laundry Machinery, etc.—Panama Canal.

Hardware.—See Belting, etc.—J. P. Campbell.

Heater.—R. W. Compton, 1508 Candler Bldg., Atlanta, Ga.—Second-hand copper coil heater; 100 H. P.; standard make; good condition.

Heating Plant.—John T. Stevens, Kershaw, S. C.—Prices on hot-water heating plant for \$20,000 residence.

Heating Plant.—Duval County Board of Public Instruction, F. A. Hathaway, County Supt., Jacksonville, Fla.—Bids until Aug. 26 for plumbing and heating school building near Fishweir Park after plans and specifications by Rutledge Holmes, Archt., Jacksonville; also for plumbing and heating school building at South Jacksonville after plans by Mark Sheftall, Archt., Jacksonville; proposal forms obtainable from Archt.

Heating Plant.—Edwin E. Macy, Eau Gallie, Fla.—Prices on heating plant for \$40,000 school at Cocoa, Fla.

Hydro Extractors.—G. J. Adams, Const. Engr., 39 South St., New York—3 or 4 hydro-extractors; 42-in. or larger; belt-driven type with copper baskets; second-hand.

Heating.—J. R. Voss, Walnut Cove, N. C.—Prices on steam heating plant for \$3500 school.

Ice Machinery.—Bureau, Yards and Docks, Navy Department, Washington, D. C.—Bids until Sept. 2 for ice-making and cold-storage plant for U. S. Marine Barracks, Peking, China; plans and specifications on application to Bureau.

Ice Plant.—Clarence E. Hammer, Narrows, Va.—Addresses of manufacturers of ice plant machinery.

Iron Blocks.—Yellville Machine Shops & Foundry Co., Yellville, Ark.—20 squares corrugated iron blocks.

Iron Gates and Fences.—E. T. Thomas, 320½ Twelfth St., Miami, Fla.—Addresses of manufacturers of iron gates and fences, etc.

Iron Standards.—Gilbert C. White, Engr., Durham, N. C.—Prices on single light standards.

Iron Work.—P. H. Guttman & Co., 1536 N. Gay St., Baltimore.—Prices on iron work for \$3000 dwelling and undertaking establishment.

Knitting Machinery.—Prince George Mfg. Co., Hopewell, Va.—Catalogs and prices on knitting and finishing machinery for light weight and medium hosiery.

Laboratory Equipment.—Edwin E. Macy, Eau Gallie, Fla.—Prices on laboratory equipment for graded and high school at Cocoa, Fla.

Laboratory Supplies.—See Chemicals, etc.—Amato y Chies.

Laundry Machinery.—W. E. Robinson, Attalla, Ala.—Laundry machinery for steam outfit.

Laundry Machinery.—S. G. Collins, Milton, Fla.—Addresses of laundry machinery manufacturers.

Laundry Machinery.—C. D. Hyatt, Lake City, S. C.—Addresses of manufacturers laundry machinery.

Laundry Machinery, etc.—Panama Canal, Earl I. Brown, Gen. Purchasing Officer, Washington, D. C.—Bids until Aug. 18 for furnishing laundry machinery, oil burning boilers, engine lubricators, cold rolled steel, chain, wire lath, manganese steel castings, bolts, rivets, nuts, lag screws, washers, cast-iron pipe, lead pipe, brass tubing, shower heads, cocks, door and window hardware, steel lockers, steam tables, etc.; blanks and information (Circular No. 1068) obtainable from offices of: Panama Canal; Asst. Purchasing Agents at 24 State St., New York; 614 Whitney Central Bldg., New Orleans; Fort Mason and San Francisco; also from United States Engineer's offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; also from Chamber of Commerce, Quincy, Ill.; Commercial Club, Tacoma, Wash., and Commercial Club, Kansas City.

Locomotive.—Heinken Reduction Co., Marine Bank Bldg., Baltimore, Md.—5 or 6-ton 24-in. gauge steam locomotive; new or second-hand.

Locomotive.—R. K. Papin, 35 Locust St., St. Louis, Mo.—60-ton Mogul or 10-wheel locomotive; short wheel base; low drivers; pass I. C. C. requirements.

Machine Tools, etc.—Bureau, Supplies and Accounts, Navy Department, Washington, D. C.—Bids until Aug. 8 for furnishing and installing electric elevators, and delivering lumber, boring, drilling and milling machine, and printing machine at Navy Yard.

Metal Culverts.—Henderson County, S. A. Young, County Judge, Henderson, Ky.—Bids until Aug. 11, f. o. b. cars, on following corrugated metal culverts: 10 pieces 24-in., 24 ft. long—240 lin. ft.; 10 pieces 24-in., 20 ft. long—200 ft.; 10 pieces 18-in., 24 ft. long—240 ft.; 10 pieces 18-in., 20 ft. long—200 ft.; 20 pieces 15-in., 24 ft. long—480 ft.; 20 pieces 15-in., 20 ft. long—400 ft.; 30 pieces 12-in., 24 ft. long—720 ft.; 30 pieces 12-in., 20 ft. long—600 ft.; bidders to state gauge, chemical analysis, etc.; all pipe to be covered with not less than 2 oz. spelter to sq. ft.; S. H. Kimmel, County Road Engr.

Metal Windows and Doors.—See Building Materials.—Wise Granite & Construction Co.

Novelties.—See Chemicals, etc.—Amato y Chies.

Ornamental and Special Iron Work.—See Building Materials.—Wise Granite & Construction Co.

Paving.—Town Council, M. J. Harris, Mayor, Albemarle, N. C.—Bids until Aug. 15 for street paving; 25,000 sq. yds.; alternative bids for 50,000 sq. yds.; specifications cover sheet asphalt, bituminous concrete, brick and durax blocks, etc.; work includes grading, granite curbs, vitrified brick and concrete sewer, concrete curb and gutter, and storm drains; plans, etc., at office of Town Clerk and of Anderson & Christie, Engrs., Charlotte, N. C.; specifications loaned for \$10 deposit.

Paving.—City of Cumberland, Md., Ralph L. Rizer, City Engr.—Bids until Aug. 11 to repave Baltimore St. from B. & O. R. R. to Park St., repave S. Center St. from Harrison to Williams St. and pave Flat St. from B. & O. R. R. to Allegany St.; total, 4900 sq. yds. brick pavement on concrete base, etc.; plans and specifications obtainable from City Engr.

Paving.—The Mayor, Monticello, Ga.—Bids on 2 mi. or more cement sidewalk construction.

Paving.—Board of Commrs., John D. Kelley, City Secy., Galveston, Tex.—Bids until Aug. 10 to pave Ave. O from 23d to 35th St.; 21,000 sq. yds. pavement; 1000 lin. ft. concrete curbs; 1000 lin. ft. concrete bulk-

heads; 910 lin. ft. concrete drains; 600 cu. yds. extra concrete; H. O. Sappington, Commr. of Streets and Public Property; A. T. Dickey, City Engr.

Paving.—City of Meridian, Miss., R. L. Blanks, City Clerk and Treas., Meridian, Miss.—Bids until Aug. 8 to construct pavement, curbs and gutters on 8th St., from 35th to 38th Ave.; 5th St., from 27th Ave. to 6th St.; 24th Ave., from 5th to 7th St., and 18th Ave., from 6th to 14th St.; plans and specifications on file with City Engr.

Paving.—City of Pontotoc, Miss., Jos. P. Carey, Engr.—Bids until Aug. 10 to improve 3 mi. streets, 6 mi. curb and gutter, storm drainage and inlets, etc.; 40,000 sq. yds. asphalt macadam, penetration method.

Paving.—Street Committee (S. R. Tiddy and others), Frostburg, Md.—Bids until Aug. 5 to grade and pave Bowery St.; 1500 ft.; plans and specifications on file with Wm. Harvey, City Engr.

Paving.—City of Lenoir, Tenn., H. N. Curd, Mayor.—Bids until Aug. 11 for street improvements; 30,000 sq. yds. paving; 25,000 cu. yds. grading, 20,000 lin. ft. curbing, 6000 sq. yds. guttering and 10,000 lin. ft. sewerage; for improvement Dist. No. 1, 2, 3 and 4; bids on both concrete and concrete asphalt paving; plans and specifications at City Hall.

Pipe, etc.—Board of Purchase, E. R. Conant, Purchasing Officer, Savannah, Ga.—Bids until Aug. 1 to furnish city with following: 1200 ft. 6-in. class B cast-iron bell and spigot water pipe; 1200 lbs. pig lead; three 6x6x6 bell and tees; 1500 ft. black pipe, 1½-in.; for further information address Purchasing Officer.

Piping.—See Laundry Machinery, etc.—Panama Canal.

Plumbing.—John T. Stevens, Kershaw, S. C.—Prices on sinks and plumbing for \$20,000 residence.

Pump.—Jonesboro Supply House, Jonesboro, Tenn.—Gasoline measuring pump.

Push Buttons.—W. J. Cook, Supt. of Realty Bldg., Charlotte, N. C.—To correspond with manufacturers who can manufacture push buttons in large and small quantities.

Printing Machine.—See Machine Tools, etc.—Bureau, Supplies and Accounts.

Pumps.—See Electric-light Plants, etc.—Dixie Water & Light Co.

Reinforcing Steel.—See Building Materials.—Wise Granite & Construction Co.

Refrigerating Machinery.—Boykins Drug Co., Boykins, Va.—Second-hand or new refrigerating machinery of medium capacity.

Road Construction.—Mountain Road Com. of Polk County, C. P. Williams, Res. Engr., Wetmore, Tenn.—Bids to construct 18½-in. highway; subject to bond sale.

Road Construction.—Jefferson County Board of Revenue, Geo. H. Clark, County Engr., Birmingham, Ala.—Bids until Sept. 11 to construct Wylam-Mulga-Warrior River Rd.; plans and profiles on file with County Engr. on and after Sept. 4. (Supersedes recent item.)

Road Construction.—Road Commrs. Hunting Quarter Township, Carteret County, J. O. Mason, Chrmn., Stacy, N. C.—Bids until Aug. 21 to construct 4½ mi. of road; specifications on file with Luther Hamilton, Treas., Morehead City, N. C.

Road Construction.—Goachland County Commrs., Goachland, Va.—Bids until Aug. 1 to construct 3 sections soil road aggregating 8.3 mi.; plans and specifications on file at Clerk's office, Goachland, and with State Highway Com., Richmond; specifications on application to G. P. Coleman, State Highway Commr., Richmond.

Road Construction.—Franklin County Commrs., Louisburg, N. C.—Bids until July 31 at office Wm. H. Ruffin to construct 25 to 30 mi. sand clay roads in Cedar Rock Township; for further information address Robt. L. James, Civil Engr., R. F. D. 4, Louisburg.

Road Construction.—Highway Dept., Board of State Engrs. of Louisiana, Room 104, New Orleans Court Bldg., New Orleans, La.—Bids until Aug. 7 to construct Des Allemands-Raceland section of New Orleans-Houma Highway, about 10 mi. in LaFourche Parish; information as to location, character of work, etc., on application to Highway Dept.; W. E. Atkinson, State Highway Engr.

Road Construction.—Yazoo County Suprs., S. S. Griffin, Clerk, Yazoo City, Miss.—Bids until Aug. 7 to construct 4 mi. Panther Creek Highway from north end of new bridge over Triune Lake; plans and specifications on file with Chancery Clerk.

Road and Bridge Construction.—Norfolk County Commission for Purchase and Improvement of Roads, Portsmouth, Va.—Bids until Aug. 4 to grade and ditch 5 mi. Johnstown Rd. and ¼ mi. Gallberry Rd. with gravel; also until same date to reconstruct county's portion of Indian Poll bridge over Lafayette River and construct abutment to Broad Creek bridge; plans and specifications on file with County Clerk, Office of Engr., 1113 National Bank of Commerce Bldg., Norfolk, and with G. P. Coleman, State Highway Commr., Richmond, Va.

Roofing.—J. R. Voss, Walnut Cove, N. C.—Prices on galvanized shingles 10x14 in. for \$3500 school building.

Roofing and Sheet Metal.—See Building Materials.—Wise Granite & Construction Co.

Sawmill Equipment.—Forest Lumber Co., S. E. Patten, Mgr., Lexington, Ky.—Prices on 6-ft. hand mill, electrically-driven, complete; edger; cut-off; steam blazer; sawdust-and-refuse conveyor, etc.; also prices on timber delivered Lexington, or on cars L. & N. C. & O. R. Q. & C. R. R.; timber to include walnut, white oak, poplar ash, Lynn (or basswood), beech, maple and hickory.

School Supplies.—J. P. Caldwell, Coleman, Tex.—Prices on school supplies for school at Voss, Tex.

Screens.—See Building Materials.—Wise Granite & Construction Co.

Sewer Connections.—Dixie Culvert & Metal Co., Atlanta, Ga.—Sewer connections and fixtures that can be connected to sewer lines without aid of plumbers.

Sewer Construction.—Board of Public Works (Jas. G. Caldwell and others), Louisville, Ky.—Bids until Aug. 9 to construct sewers on Bank from 19th to 20th St., Hill from 12th to 14th St., Charles from Krieger to Spratt St., 20th from Bank to 23rd St., alley between Willow, Bassett, Slaughter and Longest Sts.; drawings and specifications on file with Board of Public Works.

Sewer System.—W. H. Lumpkin, Secy. Farmers & Business Men's Club, Cave Spring, Ga.—To correspond relative to purchase of materials for and construction of sanitary sewer system.

Sewerage System.—John T. Stevens, Kershaw, S. C.—Prices on private sewerage system for \$20,000 residence.

Shovels (Steam).—The Harvey Co., 113 South St., Baltimore, Md.—Several small steam shovels, ½ to ¾ yd. dipper.

Steel Building.—Fireproof Tobacco Storage Co., C. W. Rohmer, Prest., Lexington, Ky.—One-story steel fireproof building, 110x187 ft.

Structural Steel.—See Building Materials.—Wise Granite & Construction Co.

Tank.—Manufacturers Selling Agency, P. O. Box 634, Birmingham, Ala.—Second-hand vertical storage tank; 20,000 to 30,000 gal. capacity; state best price delivered Birmingham; specifications and condition.

Textiles, etc.—Luigi Ducco, Avenue Jules Cantini 14, Milano, Italy.—To represent manufacturers of all kinds of textile, particularly wool cloths and linings; hooks and eyes; dress buttons; safety pins; hairpins; toilet pins; needles; snap fasteners; sewing machines.

Textile Products.—M. Kuesner, 118 Laura St., Jacksonville, Fla.—Cottons, silks, satins, crepe de chine, laces, edgings, nets, thread, buttons, etc.

Timber.—Forest Lumber Co., S. E. Patten, Mgr., Lexington, Ky.—Prices on timber.—See Sawmill Equipment.

Tools, etc.—Navy Dept., Bureau, Supplies and Accounts, Washington, D. C.—1020 galvanized buckets delivered at Charleston, Schedule 959; 288 brass chest-locks, Norfolk; removers, Charleston; 120 breast drills, Philadelphia; 40 portable ½-in. electric drills, Brooklyn; each Schedule 958, etc.

Traction Shovel.—Easton Machinery Co., Drake Bldg., Easton, Pa.—¾ or 1 yd. traction shovel; second-hand; full description.

Tubing.—See Belting, etc.—J. P. Campbell.

Vacuum-cleaning System.—Board of Education, J. K. Oney, Secy., Huntington, W. Va.—Bids, specifications, etc., until Aug. 7 to install vacuum-cleaning system in high-school building now under construction; prefers that machine have capacity for operating 4 sets of tools simultaneously; bids to include 4 sets of tools, and state cost of system with only 3 sets.

Water-works.—W. H. Lumpkin, Secy. Farmers & Business Men's Club, Cave Springs, Ga.—To correspond regarding pur-

chase of materials for and construction of water-works.

Water-works.—See Electric-light Plants, etc.—Dixie Water & Light Co.

Water-works.—Town Commrs., C. E. Hall, Secy., East New Market, Md.—Bids until Aug. 15 to construct water mains and appurtenances; work comprises furnishing and installation of 5000 ft. 4 and 6-in. cast-iron mains, 13 fire hydrants, valves and fittings; contract and form of proposal on application to Mr. Bell or Kastenhuber & Anderson, Engrs., Easton, Md.; \$2 deposit for each set.

Water-works.—Tyler H. Stone, Providence, Ky.—Data and prices on machinery, etc., for water-works; probably 50,000 gals.

dally; steam or electric power; probably concrete reservoir or standpipe.

Weather Strips.—E. T. Thomas, 302½ Twelfth St., Miami, Fla.—Addresses of manufacturers of weather stripping for doors and window frames.

Well Drillers.—T. C. Hudson, Northport, Me.—To let contract for drilling 100-ft. well at Warm Springs, 80 mi. south of Atlanta, Ga.

Windmills.—See Electric-light Plants, etc.—Dixie Water & Light Co.

Woodworking Machinery.—Ronda Coop & Egg Case Co., Ronda, N. C.—Second-hand double-end rate tenoner; American preferred.

RAILROAD CONSTRUCTION

RAILWAYS

D. C., Washington.—Washington, Westminster & Gettysburg R. R. Co. has applied to the Maryland Public Service Commission for authority to sell \$630,000 of bonds; \$144,000 of preferred stock and \$100,000 of common stock, and it also asks extension of charter. Hearing Aug. 16. Proposed line is from Brentwood via Sandy Spring and Westminster, Md., to Littlestown and Gettysburg, Pa., about 83 mi. Office, 807 15th St. N. W., Washington, D. C. W. H. Saunders of Washington is Pres.; Edward P. Thomas of Sandy Spring, Md., V. P., and I. H. Saunders of Washington, Secy. and Treas. Contractor, Columbia Construction Co., 404 Southern Bldg., Washington, T. B. Redmond, Mgr.

Fla., Hernando.—Florida Central & Gulf Ry. Co. publishes articles of incorporation giving notice of intention to apply for charter Aug. 29, its proposed line being from Hernando northwest to Rockwell and Inglis, Fla., about 24 mi. It could under this charter absorb line already operated between Hernando, Rockwell and Inglis by the Standard & Hernando R. R. Incorporators include following Seaboard officials: G. Z. Phillips, Asst. Gen. Pass. Agt.; C. A. Carpenter, Asst. Gen. Fight. Agt., and H. W. Purvis, Div. Supt., all at Jacksonville, Fla.; also J. D. Ingraham and A. P. Fant of the same city. Capital, \$200,000. Mr. Purvis is Pres.; Mr. Phillips, V. P., and Mr. Carpenter, Secy. and Treas.

Fla., Sebring.—Extension of Atlantic Coast Line now building from Sebring south about 30 mi. will, it is said, be via Venus, Hall City and Labelle when it is continued on toward Immokalee. Wade, Clower & Wade of Sebring are contractors.

La., New Orleans.—Louisiana Railway & Navigation Co., it is reported, proposes to build a passenger station on the blocks bounded by Rampart, Julia, Girod, Saratoga and Liberty Sts. Wm. Edenborn, Ibernia Bank Bldg., is Pres.

Ga., Savannah.—Chatham Terminal Co. has applied for charter to build a railroad about 3 mi. long from a connection with the Central of Georgia Ry. to the property of the Savannah Warehouse & Compress Co.; capital stock \$50,000; office in Savannah. The petitioners include officers of the Central of Georgia Ry. thus: W. A. Winburn, Pres.; A. R. Lawton, V. P.; L. W. Baldwin, Gen. Mgr., and C. K. Lawrence, Ch. Engr.; also T. M. Cunningham, Jr., J. R. Anderson, George T. Cann, O. R. Teague, V. C. Tompkins and C. W. Small, all of Savannah.

Ky., Barbourville.—Cumberland & Manchester R. R. to be 24 mi. long from Barbourville to Manchester, Ky., has completed and placed in service for freight 12 mi. of line.

Miss., Leakesville.—Alabama & Mississippi R. R. Co. has had charter amendment approved permitting construction of an extension northwest from Leakesville to Laurel, Miss., about 50 mi. Line is already built several miles beyond Leakesville. N. E. Turner, Vinegar Bend, Ala., is Pres. and Gen. Mgr.

Mo., Kansas City.—Kansas City Interurban Terminal Co. has applied to the City Council for 30-year franchise to build station on Baltimore Ave. between 9th and 10th Sts., running back to Wyandotte St. Estimated cost, \$1,300,000. All but \$40,000 subscribed. Commercial Improvement Co., Edward J. Becker, Secy., is interested, with Felix L. LaForce, E. F. Swinney, John F. Downing, W. T. Kemper and others as committee in charge.

N. C., Whiteville.—Whiteville Lumber Co. will complete main line railroad southeast to Reaves Ferry, and may extend it 15 mi. farther to Shallotte, in the southern part of Brunswick county. Company is also con-

sidering building a railroad to connect with the Seaboard Air Line about 12 mi. north of Whiteville, but has not decided upon construction. Nathan O'Berry, Goldsboro, N. C., is Pres.

Okla., Forgan.—Colorado, Kansas & Oklahoma R. R. Co. is reported contemplating construction of an extension through the western part of Kansas to Forgan, Okla., about 150 mi. F. S. Yantis is V. P. and Gen. Mgr. and B. L. Allen Ch. Engr. at Scott City, Kans.

Okla., Muskogee.—Missouri, Kansas & Texas Ry. is reported to have let contract to L. J. Smith Construction Co., 1116 Commerce Bldg., Kansas City, to widen cuts and banks on 80 mi. of line, for which some work will be sublet.

Okla., Sapulpa.—St. Louis & San Francisco R. R. it is reported, will build storage tracks in connection with improvements at Sapulpa to cost approximately \$450,000. F. G. Jonah, St. Louis, Mo., is Chief Engr.

Okla., Shattuck.—North Texas & Santa Fe Ry. Co. has been chartered in Texas to build

a line about 85 mi. long from a point in this (Ellis) county, Okla. (perhaps Shattuck), west to a point (perhaps Hansford) in Hansford County, Tex. Incorporators include E. P. Ripley, Pres. of the Santa Fe System, Chicago, Ill.; F. C. Fox, V. P. and Gen. Mgr.; E. A. Goeldner, Asst. to V. P. and Gen. Mgr., and A. E. Meyer, Auditor Panhandle & Santa Fe Ry., all of Amarillo, Tex., and others. F. M. Bisbee, Amarillo, is Ch. Engr.

Tex., Lubbock.—Lubbock & Great Northern Railroad Co., capital \$150,000, with headquarters at Lubbock, is chartered to build from Lubbock northeast to a connection with the Missouri, Kansas & Texas Railway in Collingsworth County, Tex. (presumably at Wellington), about 125 mi. Incorporators: J. M. Elliott, S. S. Houston, F. V. Leak and others.

Va., Holladay.—Survey has been made for a branch of the Chesapeake & Ohio Ry. to the Holladay lead and zinc mine, says a letter to the Manufacturers Record, and its construction will be pushed without delay. F. I. Cabell, Richmond, Va., is Ch. Engr.

Va., Winchester.—With reference to recent report that he and others are interested in plans for the construction of a railroad from Winchester to Wardsville, W. Va., and Lost River Valley, 30 or 40 miles. W. B. Cornwell, Pres. Lost River Lumber Co., Romney, W. Va., says it is proposed to build a railroad to develop timber land on Great Capon and Lost River in the vicinity of Wardsville.

STREET RAILWAYS

Fla., Jacksonville.—Jacksonville Traction Co., it is reported, will build an extension about 1½ mi. on 8th St. and Talleyrand Ave. Hardy Croom is Mgr.

Fla., Miami.—Survey is being made for an extension of the Miami Traction Co.'s line on Waddell St. and Biscayne Drive. B. B. Tatum and others interested.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Appoints Southern Representative.

Fyans, Fraser & Blackway Co., Fall River, Mass., will hereafter have its line of textile machinery represented throughout the South by the Southern Textile Machinery Co. of Greenville, S. C.

Gets Heating Contract.

Contract has been awarded to the Hammond Heating Co., 120-122 East Pearl St., Cincinnati, for heating and ventilating the Lewis school at Kingston, N. C., with its fan furnace system of warm air heating.

Extensions to Steel Plant.

Since the first of July three new 160-ton open hearth furnaces have been started by the Youngstown Sheet & Tube Co. of Youngstown, Ohio. Owing to the scarcity of labor and materials, completion of the company's by-product coke plant has been delayed, but it is reported that it will be in operation in a short time.

Georgia Brick for New Jersey.

An order for 126 car loads of brick for delivery at Warners Station, N. J., and another order for 125 car loads of tile, rings and brick for Brills, N. J., have recently been secured by the B. Midlin Hood Brick Co., Candler Bldg., Atlanta, Ga., manufacturer of Hood's "Pottery" tile and brick, face brick, acid rings and blocks.

For Geological Work in Oklahoma.

The staff of the Petroleum Division of the Associated Geological Engineers, 331 Fourth Ave., Pittsburgh, has recently been augmented by engaging Ernest Marquardt for service in Oklahoma. Mr. Marquardt has lately returned from China, where he was attached to the geological staff of F. G. Clapp, remaining in China after the return home of the latter a year ago.

Vilter Refrigerating Machinery.

Among recent Southern sales of ice making and refrigeration machinery reported by The

Vilter Manufacturing Co., 832 Clinton St., Milwaukee, Wis., is a 15-ton refrigerating outfit for the Jacksonville (Fla.) plant of Swift & Co. of Chicago. The Lufkin (Tex.) Ice Co. has also made improvements to its plant by installation of 4 coils improved counter current atmospheric type ammonia condensers, each coil 16 pipes high by 20 feet long, all furnished by the Vilter Company.

In New Quarters.

Wallace & Tiernan Co., Inc., of New York, has moved into its new factory at 137 Center St., which has a floor space over three times that of its former location on Liberty St., and better facilities for maintaining its high standard in the manufacture of chlorine control apparatus for water and sewage purification, sanitary engineering specialties, vulcanite valves, orifices and special apparatus for sanitary research work.

Wants Manufacturing Site.

By reason of having disposed of its present real estate, the Hanna Engineering Works, 2050 Elston Ave., Chicago, manufacturer of riveters, foundry equipment, etc., is seeking a new manufacturing site of from two to five acres, preferably improved with building having a ground space of 100x200 feet or more. Persons interested should give full description of property, information regarding shipping facilities, labor supply and conditions, etc.

Elected Secretary and Treasurer.

R. L. Burel, an expert auditor and accountant, formerly in business in Memphis as a certified public accountant, has been elected secretary-treasurer and general manager of the Southern Seating & Cabinet Co. of Jackson, Tenn. There will be no change in the product of the company, which specializes in contracting for the equipment of banking offices, besides handling a line of seating for churches, schools, lodges, etc.

Lets Sub-Contracts.

E. F. Hettrick Engineering Co. of Birmingham, Ala., lately noted as having contract to erect three additional stories on the present five-story warehouse of the Birmingham Ice & Cold Storage Co., has let the following sub-contracts: Carolina Portland Cement Co., Charleston, S. C., "Standard" cement; Geo. F. Wheelock Co., Birmingham, roofing; Chattanooga Iron Works, Chattanooga, Tenn., stairways and iron-work, and the Jamison Cold Storage Door Co., Hagerstown, Md., refrigerator windows.

Progressive Culpeper Machinery Co.

After having built up quite a business in the South and in Washington, D. C., the Culpeper Machinery Co., Inc., Culpeper, Va., is branching out into other fields and has recently secured orders in the States of New York and New Jersey. Grate bars and castings of every description up to five tons are manufactured by the company, and its plant, which is situated on a four-acre tract, is composed of fully-equipped machine and pattern shops with a traveling crane of six tons capacity for handling castings made in its own cupola. Good shipping facilities are provided by sidings from the main line of the Southern Railway.

Monthly Letter of Public Utility Rates.

A monthly letter devoted to a discussion of public utility rate cases and rate regulations will be published by Norton Bird and Whitman, engineers, 111 West Monroe St., Chicago, Ill., and Munsey Bldg., Baltimore, Md. The first of these monthly letters was issued in July, and covers a number of interesting references to rate matters and rate decisions, and several cases are referred to to illustrate the points advanced. This engineering firm specializes in rate surveys and the preparation of rate schedules, appraisals, reports, special investigation of industrial and utility properties and construction and design.

Terra-cotta Plant Begins Operation.

Last April the Chesapeake Terra Cotta Co., with offices at 9 E. Lexington St., Baltimore, was incorporated, and after purchasing the plant of the Maryland Terra Cotta Co. made extensive alterations and improvements which, having been completed, the manufacture of high-grade terra-cotta for architectural purposes has commenced. At present five kilns are available with ample shop and milling capacity, with plenty of additional room for future expansion. The company expects to enter particularly to the Southern States, and with its plant located on the Baltimore & Ohio Railroad, shipments can be made direct in car lots to consumers. John Whitridge is president of the Chesapeake Terra Cotta Co., G. L. Brennan is superintendent of the plant, and Francis Parsons is in charge of sales.

Packard Factory Additions.

During the coming year the construction department of the Packard Motor Car Co. of Detroit will build an addition to the main power-house 84x140 feet to house eight boilers and one air compressor; two wings to the stock building, six stories high, each 200 feet long, and of exceeding heavy construction, to handle heavy stock parts; a traffic garage, 176 feet long; a coal system for the north power-house capable of handling 40 tons an hour, and a dis-storage building for the forge 144 feet long. New buildings erected in the past 12 months cover more than six acres of ground, and are said to cost \$1,000,000, while several additional millions have been expended by the company for labor-saving machinery, and other modern factory equipment in order to keep up the Packard standard of efficiency.

Vincennes Bridges Withstand Heavy Floods.

Bridges built by the Vincennes Bridge Co., Vincennes, Ind., across the Yadkin River, between Forsyth and Yadkin counties, and Forsyth and Davie counties, North Carolina, are said to have been unharmed by the recent heavy rains which caused unprecedented flood conditions in that section. The Board of County Commissioners of Forsyth County, writing from Winston-Salem, N. C., regarding the extent of damage suffered by the county, said in part: "We congratulate ourselves that we are getting off as light as we are in our county and feel that a cheaper bridge or one that had been less properly constructed would now have been a total wreck, as nearly all of the other bridges all the way up the river seem to be. The Vincennes Bridge

[Continued on Page 86.]

Exposition Bulletin No. 8

¶ The National Exposition of Chemical Industries was organized to bring Business Men and Manufacturers together with Chemists and Chemical Engineers.

¶ It fulfilled all its aims and objects during the first Exposition.

¶ It placed initiative, ability and capital in touch with undeveloped resources, and pointed the way to the proper utilization and development of these resources.

¶ It brought into being many new plants—brought many old ones to use newer and more efficient machinery processes and products.

¶ The opportunity of the South has come!

¶ The chemist, chemical engineer and capitalist who have the knowledge, brains, ability, initiative and finance with which to develop these resources should be shown these resources and opportunities.

¶ The railroads, private interests and Southern States have the responsibility of the development of these resources on their shoulders.

¶ Manufacturers of machinery should show their equipment and what it will do.

¶ The producer of the finished material, the intermediate and the crude, should display his product and seek wider recognition and uses for it.

¶ An exhibitor at the Exposition of Chemical industries will be brought into intimate contact with the men that will develop these resources and bring the producer of machinery and products into touch with the consumer.

For particulars as to cost, space available, etc., write

National Exposition of Chemical Industries

GRAND CENTRAL PALACE, NEW YORK CITY

Remember the Date—Week of September 25th

Merchants-Mechanics National Bank

South and Water Sts., BALTIMORE, MD.
DOUGLAS H. THOMAS, President.
JNO. B. RAMSAY, V.-P. and Chm. Bd. of Dir.
JOHN B. H. DUNN, Cashier.
Capital \$2,000,000. Deposits \$21,670,000.
Surplus and Profits \$2,175,000.
Accounts of Banks, Bankers, Corporations and Individuals solicited.
We invite correspondence.

The National Exchange Bank OF BALTIMORE, MD.

Hopkins Place, German and Liberty Sts.
Capital \$1,500,000.
March 30, 1915, Surplus and Profits, \$850,000.00.
OFFICERS.
WALDO NEWCOMER, President.
SUMMERFIELD RALDWIN, Vice-Pres.
R. VINTON LANSDALE, Cashier.
C. G. MORGAN, Asst. Cashier.
Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

We Buy Bonds

City, County, School and Road, from Municipalities and Contractors.
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CINCINNATI OHIO

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from Contractors and Municipalities
STACY & BRAUN
Second National Bank Bldg., TOLEDO, O.

First National Bank

RICHMOND, VIRGINIA
Capital and Surplus - - - - \$3,000,000
JNO. B. PURCELL, President.
JNO. M. MILLER, JR., Vice-Pres.
W. M. ADDISON, Cashier.

WE BUY BONDS CITY, COUNTY, SCHOOL DISTRICT

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NEW YORK CHICAGO CINCINNATI

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J. Ernest Smith, President & General Counsel.
Chas. Warner Smith, Vice-President.
Harry W. Davis, Secretary and Treasurer.
Charles B. Bishop, Assistant Secretary.

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Tribune Building. NEW YORK, N. Y.
Confidential Negotiations. Investigations. Settlements and Purchases of Property.

[Continued from Page 84.]

Co. did its work on the Yaddin in its unusually competent manner and the standing bridges are testimonials of the thoroughness of its methods of construction."

Du Pont Buys Fairfield Rubber Co.

In the Du Pont Magazine for August, published monthly by E. I. du Pont de Nemours & Co. of Wilmington, Del., to disseminate information regarding the use and wide variety of its products, is given the following: "The Du Pont Fabrikoid Co. has purchased the Fairfield Rubber Co., with plants at Fairfield, Conn. The Fairfield Company manufactures a coated textile similar to Fabrikoid that is used extensively for tops by automobile and carriage manufacturers. All the present employees will be retained, the change affecting only the owners. The company will not consolidate with the purchasers, but will continue as the Fairfield Rubber Co., endeavoring to uphold, if not better, the present standard of their product. J. K. Rodgers, sales manager of the Du Pont Fabrikoid Co., will act in the same capacity for the Fairfield Company."

Sewage-Disposal Equipment.

A surface closet attachment manufactured by the Dixie Culvert & Metal Co. of Atlanta, Ga., is said to meet the approval of all health authorities; in as much as it confines both the urine and feces, prevents flies from getting to the excreta and is, for all practical purposes, odorless, the odors being drained off by means of a vent pipe which extends out and over the top of the surface closet. The material from which this attachment is made is Armeo (American Ingot) iron, and the coating is the well-known "Ebonized," which is applied at a very high temperature. This coating is practically impervious to the chemical action of either excreta or sewage. Armeo (American Ingot) iron has had many tests as a container and conveyor of sewage, and these tests have shown that the product is resistant to

corrosion under these conditions. The Dixie Culvert & Metal Co. is now ready for orders for this equipment, and will, where large numbers are bought, undertake to have the attachments installed. In addition to this attachment, the company is making a line of small disposal plants and septic tanks which are claimed to embody latest discoveries that have been made by the U. S. Public Health Service.

Recent Bruce-Macbeth Engine Installations.

Advantages of private power plants for many kinds of service are so evident that many of the largest and most successful concerns are installing their own gas engine plants. Some of the recent orders received by The Bruce-Macbeth Engine Co., 2135 Center St., N. W., Cleveland, are as follows: The Faultless Rubber Co., Ashland, Ohio, one 350 H. P. engine, making it the fourth Bruce-Macbeth gas engine to be installed by that rapidly growing concern; F. E. Myers & Bros., Ashland, one engine; Theodore Kundtz, Cleveland, two engines, which are second and third repeat orders within a year; Antler Hotel, Youngstown, Ohio, one 39 H. P. engine; Eastman Machine Co., Buffalo, one 40 H. P. engine; A. E. Gruber, Pittsburgh, one 40 H. P. engine; The James McCord Grocery Co., Fort Worth, Tex., one 75 H. P. engine for lighting, elevator and refrigeration service; Borough of Emporium, Pa., one 150 H. P. engine for municipal service, a duplicate of the Bruce-Macbeth gas engine installed two years ago; Tygart Glass Co., Grafton, W. Va., one 150 H. P. engine; Bellview Garage, Milwaukee, one 125 H. P. producer gas engine direct connected to generator for lighting and charging storage batteries; Tod House, Youngstown, two duplicate units for lighting, power and elevator service; American Window Glass Co., Pittsburgh, one 250 H. P. engine, being the third repeat order, and one gas engine for the American Extract Co., Port Allegheny, Pa.

FINANCIAL NEWS

FINANCIAL CORPORATIONS

Ala., Clanton.—A new national bank is reported being organized by J. E. Robinson and C. F. Jones, Clanton, and B. L. Gaddiss and W. L. Lancaster, Wetumpka.

Ala., Sylacauga.—The City National Bank, a conversion of the Marble City Savings Bank, is chartered; capital \$50,000.

Ark., Hazen.—The New Bank of Hazen is chartered; capital \$10,000, surplus \$1000. G. H. Screeton, Prest.; W. D. White, V.-P., and H. A. Houston, Cashier.

Ga., Sale City.—Farmers and Merchants' Bank has begun business; John D. Walker, Sparta, Prest.; J. M. Kirkpatrick, Cash.

Ky., Maysville.—Bank of Maysville has filed articles of incorporation; capital \$100,000; J. F. Barbour, Prest.; A. M. J. Cochran and N. S. Calhoun, V.-Ps.; R. K. Hoeflick, Cash.; G. T. Barbour, Asst. Cash.

Ky., Sturgis.—Farmers State Bank, Incptd., capital \$25,000. W. W. Slaton, Prest.; A. S. Winston, V.-P., and S. W. T. Wallace, O. C. Quiry, J. E. Meacham, C. C. Hammack, H. S. Newcomb, W. W. Slaton and A. S. Winston, directors.

La., Gretna.—Jefferson Parish Homestead Assn. has published its charter; capital \$3,000,000. Directors: Charles Baccarach, Hugh Burbank, Thomas W. Coffey, Chas. D. Evans, Jules G. Fisher and others.

La., New Orleans.—Alaska Industrial Life, Accident, Burial and Health Benefit Insurance Co. of New Orleans is organized with \$15,000 capital; Adam A. Muhleison, Prest.; Dr. Anthony J. Montz, V.-P.; John A. Preston, Secy. and Gen. Mgr.

Mo., St. Louis.—Security Savings & Loan Assn., capital \$100,000 is incptd. by B. J. Cuddihoe, O. B. Brown, Henry G. Mack and others.

N. C., Durham.—Home Agency Co. is chartered, capital \$20,000; incorporators, J. F. Glass, T. D. Wright, A. H. Carr and James O. Cobb.

N. C., Fayetteville.—A new national bank with \$50,000 capital, it is reported, is to be organized. S. D. Scudder of the Fourth National Bank of Fayetteville is said to be interested.

S. C., Columbia.—Workingman's Bank of Columbia chartered; capital \$5000; L. J. Frink, Prest. and Secy.; E. K. McQuatters, V.-P. and Treas.

S. C., Columbia.—McCormick Building & Loan Association has been granted a com-

mission; capital \$10,000 to \$100,000. Petitioners: F. C. Robinson, T. M. Ross, J. J. Darn, J. E. Britt and J. E. Ashmore.

S. C., Greenville.—Prudential Fire Insurance Co., capital \$50,000, surplus \$10,000, will begin business Aug. 5; J. W. Norwood, Prest. and Treas.; J. F. Gallivan, V.-P., and L. B. Houston, Secy.

Tenn., Nashville.—The State Bank & Trust Co., 306 Union St., is reported to have secured control of the Southern Bank & Trust Co. Vauxhall Bldg., and in the future the two companies will be under the same management, retaining, however, their own names, charters and banking-houses.

Tenn., Spring City.—Bank of Spring City, succeeding the First National Bank, has begun business; capital \$25,000; surplus \$10,000. Organizers: J. F. Collins, A. B. Collins, J. H. Rogers, G. A. Elliott and A. D. Paul. Officers not yet elected.

Tex., Commerce.—Citizens State Bank chartered with \$25,000 capital is authorized to begin business. J. G. Allen, Prest.; R. D. Wynn, Cashier.

Tex., Georgetown.—Guarantee Abstract Co. of Georgetown is chartered; capital \$25,000. Incptors: Mrs. E. V. Ellyson, John N. Ellyson and C. T. McMurray.

Tex., El Paso.—First Mortgage Guaranty Co., chartered; capital \$200,000. Incptors: James G. McNary, W. W. Turney, W. L. Looney, C. M. Newman and Joshua S. Reynolds.

Tex., Henrietta.—A private bank, capital \$50,000, is reported opened by Dale Bros. & Co. J. E. Dale, Prest.; J. L. Huggins, 1st V.-P.; J. T. Dale, 2d V.-P.; L. R. Hamm, Cashier.

Va., Craigsville.—Bank of Craigsville, capital \$10,000, began business July 24. W. S. Johnson, Prest., Craigsville; Dr. Jno. L. Hankins, 1st V.-P., Fordwick, Va.; Dr. J. B. Tuttle, 2d V.-P., and Roy S. Gochenour, Cash., Craigsville.

W. Va., Walton.—Walton State Bank, incptd., capital \$25,000, will begin business about Sept. 1. Incorporators: R. I. Dodd, L. F. Whitte, Wm. Hensley, J. E. Neal and Wm. Norris.

NEW SECURITIES

Ark., Little Rock.—\$50,000 5½ per cent. 5-15-year bonds Fourchee Levee Dist. have been purchased at par and accrued interest by the Mercantile Trust Co., Little Rock.

Fla., Arcadia.—Election is to be held Aug. 2 to vote on \$50,000 street improvement, \$21,000 sanitary sewer, \$19,000 water-works extension and \$15,000 site and city hall 6 per cent. 30-year bonds. Address The Mayor.

Fla., Bartow.—\$20,000 6 per cent. 20-year \$500 denomination bonds Bartow Special Tax School Dist. No. 7 have been purchased at \$22,015 by C. W. McNear & Co., Chicago.

Fla., Blountstown.—Election is to be held in Calhoun County Aug. 15 to vote on \$130,000 road bonds, maturing Oct. 1, 1937. Address County Comms.

Fla., Daytona.—Election will probably be called to vote on \$100,000 to \$125,000 street-paving bonds. Address The Mayor.

Fla., Fort Ogden.—\$20,000 schoolhouse bonds are to be issued. Address Board of Trustees.

Fla., Havana.—\$20,000 water-works and electric-light bonds are soon to be offered for sale. Address The Mayor.

Fla., Kissimmee.—Election is to be held in Osceola County to vote on \$150,000 road and bridge bonds. Address County Comms.

Fla., Miami.—Election to vote on \$600,000 5 per cent. \$1000 denomination Dade County causeway bonds will be held Aug. 22; dated Oct. 1, 1916; maturity Oct. 1, 1933, to Oct. 1, 1961. J. T. Merritt, Clerk County Commission.

Fla., Perry.—\$600,000 5 per cent. Dixie road (Taylor County) bonds are voted. Maturity, \$90,000 Jan. 1, 1922, and \$100,000 each year five years thereafter. Address County Commissioners.

Fla., Sarasota.—Election is to be held Sept. 5 to vote on \$30,000 park and \$18,000 municipal pier 30-year \$500 denomination bonds. Harry L. Higley is Mayor and Prest. City Council.

Fla., Titusville.—\$75,000 bonds Cocoa-Merritt Island bridge bonds, Brevard County, have been validated by the Circuit Judge at De Land, and bids for same will be opened in September. Address County Comms. at Titusville.

Ga., Cave Springs.—Election to vote on \$16,000 water-works and \$4000 sewer 5 per cent. bonds will be held Aug. 31. Address W. H. Lumpkin, Secy. Farmers & Business Men's Club. R. B. Reeves is Mayor and J. Leo Baker, Recorder.

Ga., Commerce.—Election is to be held Aug. 15 to vote on \$10,000 5 per cent. \$500 denomination electric-light bonds. C. J. Hood is Mayor.

Ga., Dublin.—\$30,000 5 per cent. 30-year \$1000 denomination bonds for filtering plant are voted. Address Light & Water Commission. W. W. Robinson is Mayor.

Ga., Lavonia.—\$50,000 water, sewer and school bonds have been purchased at \$50,750 net by J. H. Hilsman & Co., Atlanta, Ga.

Ga., Rockmart.—Farmers & Merchants National Bank will begin business Sept. 1; capital \$40,000. Thomas J. Flournoy, D. B. Simon, R. R. Beasley, S. O. Jones and E. Kingsberry, incpts.

Ky., Benton.—Petition is being circulated in Marshall County calling for an election to vote on \$100,000 road bonds. Address County Comms.

Ky., Cadiz.—Steps are being taken to place on the market \$90,000 of an authorized issue of \$150,000 4½ per cent. 5-30-year \$1000 denomination Trigg County road bonds. M. S. Vauny is County Agt.

La., Rayville.—Bids will be received until Aug. 25 by Secy. Richland Parish School Board for \$4000 5 per cent. \$500 denomination school bonds.

La., Flourenoy.—\$8000 school bonds are reported voted. Address Bd. of Education.

La., New Roads.—\$40,000 bonds Road Dist. No. 3, Pointe Coupee Parish are voted. On Aug. 16 bond elections are to be held in Road Dists. 1 and 2. Address Police Jury.

La., Oakdale.—\$8500 5 per cent. \$250 denomination Ville Platte and \$4000 to \$7000 5 per cent. \$100 to \$500 denomination Oakdale water and light bonds have been purchased by J. R. Sutherland & Co., Kansas City, Mo.

La., Colfax.—Election is to be held in Grant Parish Sept. 5 to vote on \$10,000 school bonds Dry Prong Dist. No. 11. Address Police Jury.

La., Jennings.—Election reported held on \$40,000 high school building bonds. Result not stated. Address Board of Education.

La., Opelousas.—Bids will be received until 2 P. M., Sept. 4, for \$18,500 5 per cent. 1st Road Dist. bonds of 4th Police Jury Ward, dated July 1, 1916. Denomination \$500. Maturity July 1, 1920 to July 1, 1947. Address J. J. Henley, Clerk, or F. Octave Pavy, Prest. Police Jury, St. Landry Parish.

La., Rayville.—Election is to be held about Sept. 16 in Richland County to vote on \$130,000 5 per cent. 1-40-year road and bridge bonds. Address Theo. J. Coenen, Chrmn. Comms., Rayville Progressive League.

Md., Chestertown.—\$18,000 5 per cent. Kent County school bonds have been purchased by Alexander Brown & Sons, Baltimore.

Md., Chesapeake City.—Bids will be received Aug. 7 for \$5000 5 per cent. \$500 denomination town bonds, maturing July 1, 1922 and 1927. Address Prest. Board Town Comms.

Md., Rockville.—\$127,000 4½ per cent. Montgomery County school and road bonds have been purchased at \$131,393.84 by the Citizens National Bank of Frostburg, Md.

Miss., Ackerman.—Election is soon to be held in Choctaw County to vote on \$25,000 road bonds. Address County Comms.

Miss., Brandon.—Bids for \$50,000 road bonds Beat No. 1, Rankin County, will be sold Sept. 4. Address County Comms.

Miss., Brookhaven.—Bd. of Supvrs. Lincoln County at their August meeting will consider question of issuing \$200,000 road bonds.

Miss., Cleveland.—Bids will be received until Aug. 7 by P. B. Wollard, Clk., Bolivar County, for \$50,000 6 per cent. 10-20-year \$1000 denomination road bonds.

Miss., Clinton.—\$7500 water bonds defeated.

Miss., Greenwood.—\$20,000 5 per cent. 20-year paving bonds, dated Aug. 1, 1916 and maturing Aug. 1, 1936, have been purchased by Powell, Garard & Co., Chicago, at par, accrued interest and premium of \$214.

Miss., Jackson.—\$50,000 refunding and \$300,000 20-year improvement 4½ per cent. Mississippi State bonds have been purchased at par and \$6480 premium by R. M. Grant & Co., New York.

Miss., Senatobia.—Election Aug. 2 on \$5000 bonds Independence School Dist., Tate County. Address County Comms.

Mo., Independence.—Election is to be held Aug. 10 to vote on \$35,000 school bonds. Address Bd. of Education.

Mo., Liberty.—\$20,000 5 per cent. 5-20-year sewer bonds have been purchased at \$20,359.13 by the H. P. Wright Investment Co., Kansas City, Mo.

Mo., Maryville.—\$25,000 5 per cent. Washington township, Nodaway County, road bonds have been sold at \$25,381.75 and accrued interest to time of delivery by the Mercantile Trust Co., St. Louis.

Mo., Mount Vernon.—\$60,000 5 per cent. road bonds Aurora Special Road Dist., Lawrence County, are voted. Address County Comms.

Mo., Union.—\$7500 5 per cent. 5-20-year improvement bonds have been purchased at par and interest by the Bank of Union.

N. C., Ayden.—\$10,000 6 per cent. 20-year funding bonds have been sold at par, ex-

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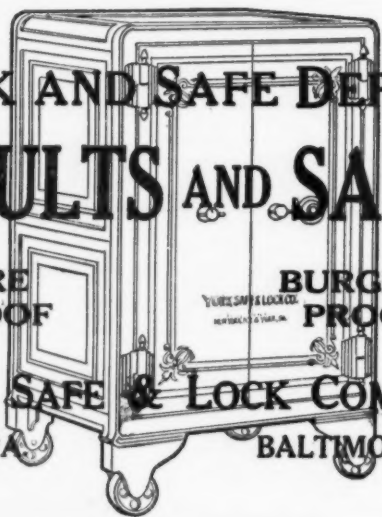
RICHMOND, VA.

BANK AND SAFE DEPOSIT VAULTS AND SAFES

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penses and accrued interest to Bruce Craven of Trinity, N. C., attorney for W. L. Slayton & Co., Toledo.

N. C., Beaufort.—Bonds for seawall are to be issued. Address The Mayor.

N. C., Beaufort.—Town Commrs. have voted \$10,000 for bonds for seawall. Election is to be held to vote on \$75,000 sewerage, water and street improvement bonds.

N. C., Durham.—\$250,000 5 per cent. water and \$70,000 4½ per cent. refunding bonds have been purchased at \$340,279 by Bernhard-Scholls Co., New York.

N. C., Gastonia.—Gaston County has arranged to obtain a loan of \$1,000,000 at 4 per cent., it is reported, through the First National Bank of Gastonia, N. C., and the First National Bank of Richmond, Va., for the replacement of bridges recently destroyed by floods and also to repair roads. Whether note or bonds will be issued is not stated.

N. C., La Grange.—Election to vote on \$68,000 municipal improvement bonds will be held Aug. 7. Dr. J. W. P. Smithwick is Mayor.

Okl., Bessie.—\$200 6 per cent. 10-year city hall bonds have been purchased at par by the Second National Bank of Oklahoma City; denominations \$300 and \$500.

Okl., Goltry.—\$8500 electric-light and \$2500 telephone 6 per cent. 2-12-year bonds have been purchased by G. I. Gilbert of Oklahoma City.

Okl., Lawton.—\$10,000 bonds for local Fair Grounds are voted. Address The Mayor.

Okl., McLoud.—\$15,000 water bonds recently voted have been declared invalid and another election will be held. Address The Mayor.

Okl., Pawhuska.—\$35,000 6 per cent. \$1000 denomination park site and improvement bonds, dated June 20, 1916, and maturing June 20, 1941, were recently voted. Of the amount, \$15,000 will be offered in near future. H. M. Loomer is Commr. Finance and Accounts.

Okl., Wynoka.—Election is to be held Aug. 31 to vote on bonds for city hall, lighting and water systems, jail, fire station, etc. Address W. R. Barrick.

S. C., Columbia.—Bids will be received until noon Aug. 10 for \$20,000 5 per cent. school bonds Dist. No. 4, Richland County, dated July 1, 1916 and maturing July 1, 1936. Denomination \$1000. F. C. Gilmore is Chrmn. Board of School Trustees.

S. C., Conway.—\$30,000 5 per cent. 20-40-year water-works and sewerage bonds are voted. Date for opening bids not yet decided. F. A. Burroughs is Chrmn. Board of City Commrs.

Tenn., Benton.—\$95,000 5 per cent. 40-year \$1000 denomination Polk County road bonds have been purchased at \$2973.50 premium by Self & Co., Dixon Springs, Tenn.

Tenn., Jackson.—\$89,000 5 per cent. 1-5-year street improvement bonds are soon to be sold. Address The Mayor.

Tenn., Knoxville.—Ordinance has been introduced in the city council providing for an election Sept. 9 to vote on \$225,000 water bonds. John E. McMillan is Mayor.

Tex., Anahuac.—Bids will be received until 3 P. M. Aug. 15 by Thomas S. Ellis, Secy. Bd. of Directors Trinity River Irrigation Dist., for \$30,000 28-30-year \$500 denomination bonds, dated Jan. 1, 1916, and \$10,000 30-year \$250 denomination improvement bonds, dated Oct. 1, 1912.

Tex., Aransas Pass.—\$100,000 5½ per cent. bonds Defined Road Dist. No. 4, San Patricio county, defeated.

Tex., Athens.—No election held recently in Henderson County to vote on road bonds. Address C. D. Owen. (Lately noted.)

Tex., Austin.—The city recently refunded \$1,170,000 of its old bonds. There was no increase of the municipal debt. A. P. Woolbridge is Mayor.

Tex., Austin.—Bonds approved by Attorney-General: Nueces County Common School Dist. No. 15, \$2000; No. 4, \$10,000; No. 23, \$2000; Wichita Falls Independent School Dist., \$65,000 10-40-year 5 per cent.; Lamar County Common School Dist. No. 101, \$2500; Dist. No. 27, \$4000. \$120,950 Ellis County Improvement Dist. No. 2 levee improvement; \$2000 Cherokee and Rusk counties, county line common school dist. No. 94 and \$100,000 Jarrell Independent School Dist.; \$1000 5 per cent. 10-20-year Camp County Common School Dist. No. 6; \$2000 5 per cent. 5-20-year Cherokee and Rusk county line common school dist. No. 94.

Tex., Brownwood.—Question of issuing bonds for city-county hospital is being agitated. Nothing definite decided. Address Homer Boyd.

Tex., Center.—\$20,000 6 per cent. warrants have been purchased by J. L. Arlitt, Austin, Tex.

Tex., Denton.—\$20,000 school bonds are voted. Address Board of Education.

Tex., Denton.—\$20,000 school bonds are voted. Address Board of Education.

Tex., Frost.—Bids received until 8 P. M. July 31, for \$10,000 5 per cent. 30-year city bonds. T. B. Rice is Mayor and J. S. Prewall, City Secy.

Tex., Hillsboro.—\$10,000 5 per cent. street improvement bonds are voted. W. H. Knight is Mayor.

Tex., Jarrell.—\$12,000 school bonds are voted. Address Board of Trustees.

Tex., La Porte.—\$10,000 5 per cent. bonds La Porte Independent School Dist., Harris County, have been purchased by Blanton-Wise Co., Houston, Tex.

Tex., Leonard.—\$80,000 5 per cent. 40-year \$1000 denomination Local Road Dist. bonds have been purchased at par by Walker & Co., St. Louis, Mo.

Tex., Ozona.—\$20,000 Crockett County road bonds are voted. Address County Commrs.

Tex., Paris.—\$110,000 school bonds have been sold at par and premium of \$650 and accrued interest to the Temple State Bank, Temple, Tex.

Tex., Pittsburg.—\$100,000 5 per cent. 20-40-year \$1000 denomination bonds Road Dist. No. 1, Camp County, were voted July 24, and bids for same will be received at any time. G. W. Kelling is County Judge.

Tex., Port Arthur.—Bids will be received until 10 A. M. Aug. 2 by L. D. Heckman, City Clerk, for \$34,000 5 per cent. 1-40-year fire department bonds.

Tex., Richmond.—\$8000 5 per cent. bonds Common School Dist. No. 26, Fort Bend County, have been purchased by Blanton-Wise Co., Houston, Tex.

Tex., Seguin.—\$36,000 sewer bonds are voted. Address The Mayor.

Tex., Sherman.—\$100,000 school, \$50,000 sewer, \$50,000 street paving, \$30,000 water-works improvement, \$10,000 electric light and \$10,000 fire alarm 5 per cent. 40-year bonds have been purchased by William R. Compton Investment Co., St. Louis, at par, accrued interest and expenses. O. J. S. Ellington is City Mgr.

Tex., Vernon.—\$4,000 street, water and sewer bonds are voted. Address The Mayor.

Va., North View.—Bids will be received until Aug. 5 by J. R. Talkington, Town Clerk, for \$24,000 6 per cent. 1-10-year paving bonds, dated Aug. 1, 1916.

Va., Salem.—\$125,000 4½ per cent. Salem Magisterial Dist., Roanoke County, road improvement bonds have been purchased by the Farmers National Bank of Salem.

W. Va., Alvord (P. O., Spencer).—\$2500 6 per cent. 10-30-year \$100 denomination sewer bonds have been purchased at par by Roane County Bank.

W. Va., Fayetteville.—Special dispatch to the Manufacturers Record says Fayette County road bonds have been sold as follows: \$600,000 Fayetteville Dist. to Sidney Spitzer, Toledo, Ohio, at \$605,260 and interest; \$175,000 Falls and \$175,000 Sewall Mountains Dist. to Tillotson & Walcott, Cleveland and Cincinnati, at \$175,122.50 and interest for each issue. In each case the cost of bonds and the examining atty's fees are borne by the purchasers. The Nuttall Dist. bonds were not sold. R. J. Stegall is Clerk County Court.

W. Va., Kermit.—\$15,000 6 per cent. 10-30-year \$1000 to \$1500 denomination school dist. high school bonds, dated July 1, 1916, have been purchased at par, accrued interest and \$755 premium by Sidney Spitzer & Co., Toledo, Ohio.

W. Va., Jane Lew.—Bids will be received until 7:30 P. M. Aug. 21 for \$15,000 6 per cent. \$500 denomination municipal bonds. C. E. Phillips is Mayor and Geo. B. Waggoner Recorder.

W. Va., Sistersville.—Election Aug. 1 on \$30,000 municipal filtration plant bonds. Address The Mayor.

W. Va., Summerville.—Election is to be held Aug. 26 to vote on \$250,000 Beaver Dist., Nicholas County road bonds. Address County Commrs.

W. Va., Wellsburg.—\$800,000 5 per cent. 25-year \$1000 denomination Brooke County road-improvement bonds have been purchased by Harris Forbes Co., New York.

W. Va., Winfield.—Elections were held in three districts of Putnam County Aug. 1 to vote on road bonds. Address County Commrs.

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